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AS-NZS 2195 (2010) (English): Folding cots - Safety requirements [By Authority of Australian Consumer Protection Notice No. 4 of 2008]

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AS/NZS 2195:2010

STANDARDS
NEW ZEALAND
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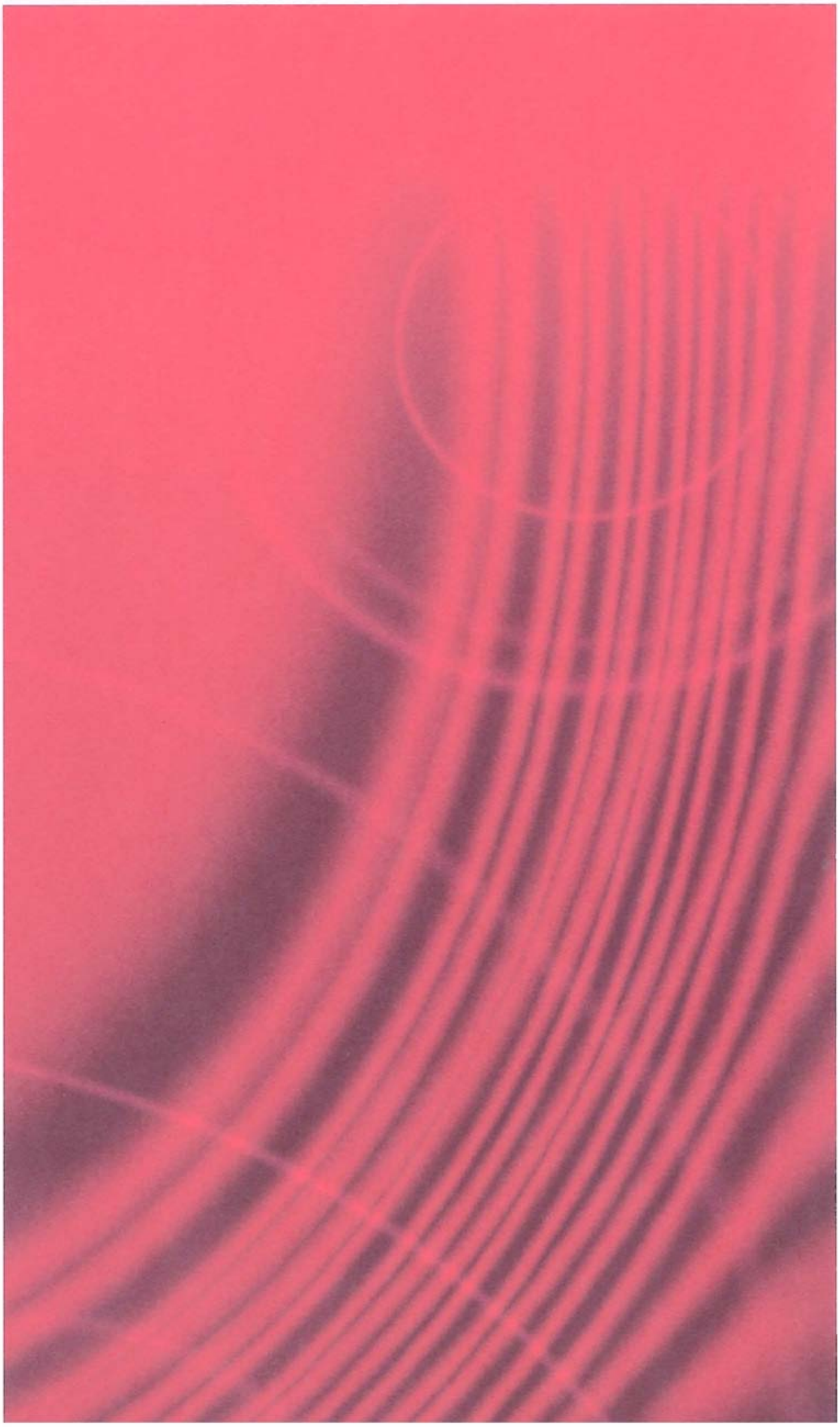
Folding cots—Safety requirements



STANDARDS
Australia

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Australian Chamber of Commerce and Industry
Australian Competition and Consumer Commission
Australian Industry Group
Australian Retailers Association
CHOICE
Consumer Affairs Victoria
Consumers Federation of Australia
Department of Health (South Australia)
Department of Tourism, Fair trading and Wine Industry Development, Qld
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AS/NZS 2195:2010

Australian/New Zealand Standard™

Folding cots—Safety requirements

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee CS-003, Safety Requirements for Children's Furniture to supersede AS/NZS 2195:1999, *Folding cots—Safety requirements*.

This Standard was revised due to a number of incidents involving folding cots and the vastly changed nature of the product since the previous edition of the Standard.

The objective of this Standard is to provide regulatory authorities with essential safety requirements and to provide manufacturers with functional, durability, stability and performance criteria to reduce the likelihood of death or injury to infants occupying folding cots.

The objective of this revision is to incorporate requirements for accessories such as bassinets, change tables, mosquito nets and specifically addresses the need for better marking and labelling requirements to prevent potential entrapment and suffocation hazards associated with these products if not used or assembled according to manufacturers' instructions.

Committee CS-003 considered suitable materials for cot sides to provide breathability. The requirements of this Standard are for cot sides with an open weave fabric with openings of at least 1.5 mm. In future, other materials may prove suitable and these will be considered for inclusion in this Standard.

This Standard is not intended to limit design, but dimensions are specified where the Committee considered that these relate to the child's safety.

The term 'normative' has been used in this Standard to define the application of the appendix to which it applies. A 'normative' appendix is an integral part of a Standard.

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FOREWORD

The most important safety hazards found with folding cots are:

(a) Inadvertent release of locking devices and subsequent collapse of a cot's side.

(b) Strangulation or asphyxiation hazard resulting from the entrapment of a child's neck if one or more of the locking devices fails and the sides form a clamping ‘v’ shape.

(c) Suffocation hazard resulting from the use of non-breathable materials for the mattress and flexible sides of the folding cot, sometimes involving a child’s head being entrapped between the mattress and flexible sides of the cot. Breathability requirements have been included for the sides of the folding cot but a requirement for mattresses is still to be developed.

Specific safety requirements are included in this Standard that are designed to overcome such safety issues. These include testing for strength and durability of the locking devices and folding mechanism. A bite test and a detachable parts test ensure children cannot swallow small parts of components of the cot. Requirements are also included to ensure there are no footholds and a sufficient depth of sides to prevent children from falling out of the cot.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard
Folding cots—Safety requirements

1 SCOPE

This Standard specifies safety requirements for folding cots and accessories used with folding cots. These requirements cover materials, design, construction, performance, labelling and marking, all of which are important for the well being of children who use cots. The Standard is applicable to folding cots constructed of metal, plastic, textile fabric or mesh. For timber folding cots or cots made with rigid materials (see Clause 5) reference is made to AS/NZS 2172. Playpens with a floor also fall within the scope of this Standard as they are essentially the same product as folding cots. Playpens without a floor are not covered by this Standard.

This Standard is not applicable to cradles, carry cots or to non-folding cots.

2 APPLICATION

This Standard is applicable to cots that can be readily dismantled or folded for transportation or storage, intended for children in households or day nurseries.

3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS		
2001	Methods of test for textiles	
2001.2.3.2	Method 2.3.2:	Physical tests—Determination of maximum force using the grab method (ISO 13934-2:1999, MOD)
2001.2.10	Method 2.10:	Physical tests—Determination of the tear resistance of woven textile fabrics by the wing-rip method
2001.2.21	Method 2.21:	Physical tests—Determination of seam opening due to the application of force in the transverse direction
2281	Flexible cellular polyurethane for seat cushioning and bedding	
AS/NZS		
2172	Cots for household use—Safety requirements	
AS/NZS ISO		
8124	Safety of toys	
8124.1	Part 1:	Safety aspects related to mechanical and physical properties (ISO 8124.1:2000, MOD)
8124.3	Part 3:	Migration of certain elements

4 DEFINITIONS

For the purpose of this Standard the definitions below apply.

4.1 Accessible to the child

Within the reach of the child that is inside the folding cot, including components of the folding cot that are on the outside to within a distance of 300 mm in any direction except below the mattress base.

NOTE: See Clause 4.12 for the definition of 'within the folding cot'. When a child is 'within the folding cot', components that a child can reach need to be tested, and components that cannot be reached do not need to be tested, e.g. castors.

4.2 Accessory

Any item that is not an integral part of the folding cot but is supplied or specified by the manufacturer or distributor as being suitable for use with the cot, e.g. bassinet.

4.3 Base

A rigid surface on which the cot mattress is supported. The base may be an integral part of the mattress.

4.4 Bassinet

An elevated surface consisting of a mattress and base for sleeping for a baby who can not sit up.

4.5 Folding cot

Enclosure intended for sleeping and which can be folded when not in use. It also refers to enclosures referred to as playpens with a floor, but not those without a floor.

4.6 Key thread

The key thread is a thread at the end of a seam that if pulled will pull the stitching apart and disassemble the sewn assembly.

4.7 Locking mechanism

A system designed to maintain the folding cot in its erected position of use and which will inhibit the cot from unintentional folding or collapsing. A locking mechanism may consist of one or more locking devices.

4.8 Mattress

A padded surface on which the child is supported. The mattress may be an integral part of the base.

4.9 Playpen

An enclosure that is designed to retain a child while playing. Playpens that include a floor are also referred to as 'folding cots', see Clause 4.5.

4.10 Shear and pinching points

Gaps which occur when two parts close together during relative movements that can trap parts of the body.

4.11 Textile material

Fabric or mesh used to form the sides, ends and base of some folding cots.

4.12 Within the folding cot

The internal space bound by the sides and the ends of the folding cot forming the walls, and the mattress base.

NOTE: See Clause 4.1 for the definition of 'accessible to the child'.

5 TIMBER FOLDING COTS

Timber folding cots shall comply with the requirements in Clauses 8.1, 10.5 and 10.9 of this Standard and all applicable requirements of AS/NZS 2172. Clauses 8.1, 10.5 and 10.9 of this Standard shall take precedence over any similar requirements in AS/NZS 2172.

NOTE: An example of a non-applicable requirement of AS/NZS 2172 would be a dimension or test involving a dropside or dropside guide if the timber folding cot does not have a dropside.

6 MATERIALS

6.1 Metals

All metal components, including springs, nuts, bolts and washers, shall be made either of corrosion-resistant material or be protected against corrosion.

6.2 Plastic materials, paints, lacquers and varnishes

All painted coatings and plastic components accessible to the child within a folding cot shall comply with the maximum acceptable levels of elements migration when tested in accordance with AS/NZS ISO 8124.3.

6.3 Textile and padding material

6.3.1 *Toxicity*

Textile materials used in the construction of folding cots accessible to the child within a folding cot shall comply with maximum acceptable levels of elements migration when tested in accordance with AS/NZS ISO 8124.3.

6.3.2 *Mesh openings*

Where mesh is used in folding cots, the mesh opening size shall comply with the relevant requirements of Clause 10.12.

6.3.3 *Breathability of textiles material and other materials*

Textile materials and other and materials used in the breathable zone around the mattress shall be such that a child can breathe through the material.

NOTE: This Standard specifies the constructional requirements for the sides of the cot but not the mattress. Manufacturers are encouraged to use suitable materials for the mattress and covering keeping in mind the possibility of suffocation.

6.4 Strength and construction

6.4.1 *General*

Textiles and mesh shall have sufficient strength and shall be sewn in such a manner that the occupant is contained within the folding cot.

6.4.2 *Breaking strength of textiles*

Textiles should have a breaking strength of at least 220 N when tested in accordance with AS 2001.2.3.2.

6.4.3 *Tear resistance of textiles*

Textiles should have a tear resistance of at least 9 N when tested in accordance with AS 2001.2.10.

6.4.4 *Seam strength*

All seams used on the sides, ends and undersides should have breaking strength of at least 130 N when tested in accordance with AS 2001.2.21.

7 CONSTRUCTION AND ASSEMBLY

The following shall apply:

(a) All components of a folding cot's construction shall be designed such that a child cannot unfasten or dismantle them. For example, the components of a folding cot could—
    (i) be permanently fixed;
    (ii) require the use of a tool to enable partial or total disassembly; or
    (iii) require a series of integrated procedures each of which is dependent on others for assembly/disassembly.

(b) There shall be no small detachable parts on a folding cot other than those complying with Clauses 7(a) and 10.10.

NOTE: The intention of Clause 7(b) is to avoid the possibility of a child swallowing or inhaling small detachable parts from the folding cot that pose a choking hazard.

(c) There shall be no open ended tubes accessible to the child within the folding cot,

(d) The folding cot when erected shall not have any features accessible to the child such as projections, holes, loose washers, fastenings, nuts or crevices on which the child's body or clothing could become snagged, or entangled or entrapped (see Clause 8.7).

NOTE: The intention of Items (c) and (d) is to avoid the possibility of a finger becoming entrapped or a child's clothing becoming snagged (and the child possibly strangled) by any component of the folding cot.

(e) The folding cot shall be designed and be able to be assembled or erected by following the manufacturer's instructions in such a way as to prevent any injury from scissoring, shearing or pinching points.

NOTES:

1 This requirement applies while the folding cot is being erected for use, being folded up, and when fully assembled.

2 Any labelling that provides precautions as to preventing an injury should be visible prior to the action of erecting or assembly of the folding cot.

(f) With the exception of inflatable tyres, no components of the folding cot shall be inflatable.

8 DESIGN

8.1 Dimensions

The following dimensions, which relate to the safety of babies and children, shall apply:

(a) *Depth of folding cot lower position (mattress and base fitted)*

The vertical distance between the top of the mattress and the top edge of the lowest side or end shall not be less than 500 mm.

(b) *Depth of folding cot bassinet position (with mattress and base fitted)*

For folding cots with a bassinet or upper base fitted, the vertical distance between the top of the edge mattress and the top edge of the lowest side or end shall not be less than 250 mm.

NOTE: In folding cots, the bassinet position (i.e. upper base position) may be an accessory, in which case the folding cot cannot comply with this Standard unless the accessory has been attached to the folding cot and subjected to all tests in this Standard as if it were a part of the folding cot unit.

(c) *Distance between the mattress and the textile material at the sides or ends of the folding cot*

The mattress and base shall touch the sides and ends of the folding cot and if applicable the sides and ends of any bassinets, i.e. fit snugly when tested as per Clause 10.21(b).

NOTES:

1 The space between the mattress and flexible sides and ends are covered by the requirements in Clause 10.2 to ensure that a child's head can not become entrapped in such a space and the requirements of Clause 10.21(b) that test for a snug fit.

2 When the product has been erected for use, all gaps should remain less than 5 mm, or 12 mm or more at all times. Flexible components of the folding cot such as textile material and mesh are covered by the requirements in Clause 10.2.

8.2 Breathability

Folding cots shall have breathable zones adjacent to the sleeping occupant as shown in Figure 1 and as follows:

(a) Breathable zones shall be provided on all sides of the lower position of the folding cot and all sides of the bassinet. Where any side of the bassinet contacts with the side of the folding cot, the side of the folding cot shall also be provided with breathable zones that are aligned with the breathable zones of the bassinet.

(b) Breathable zones shall be made of suitable materials which comply with the relevant requirement of Clause 10.12 that consist predominantly of openings that have a minimum diameter of 1.5 mm or an area of 1.8 mm^2.

NOTE: Non-circular openings are acceptable provided the minimum area of each opening is equivalent to that of a 1.5 mm diameter circle (i.e. 1.8 mm^2). See also Clause 10.12.

(c) Breathable zones may be fitted with an external flap of non-breathable material that may be rolled up or deployed to cover a breathable zone to prevent drafts. The flap shall be designed such that it cannot be fitted or drawn closely to the surface of the breathable zone.

(d) The minimum dimensions measured at the inside of the folding cot and the location of the each breathable zone shall comply with the following:

    (i) For the lower position of the folding cot, the lowermost point of the upper edge of the breathable zone shall be at least 200 mm above the level of the top surface of the mattress, and the bottom edge of the breathable zone shall be below the level of the top surface of the mattress (see Figure 1).

    (ii) For the bassinet position of the folding cot and any bassinet, the lowermost point of the upper edge of the breathable zone shall be at least 100 mm above the level of the top surface of the mattress, and the bottom edge of the breathable zone shall be below the level of the top surface of the mattress (see Figure 1).

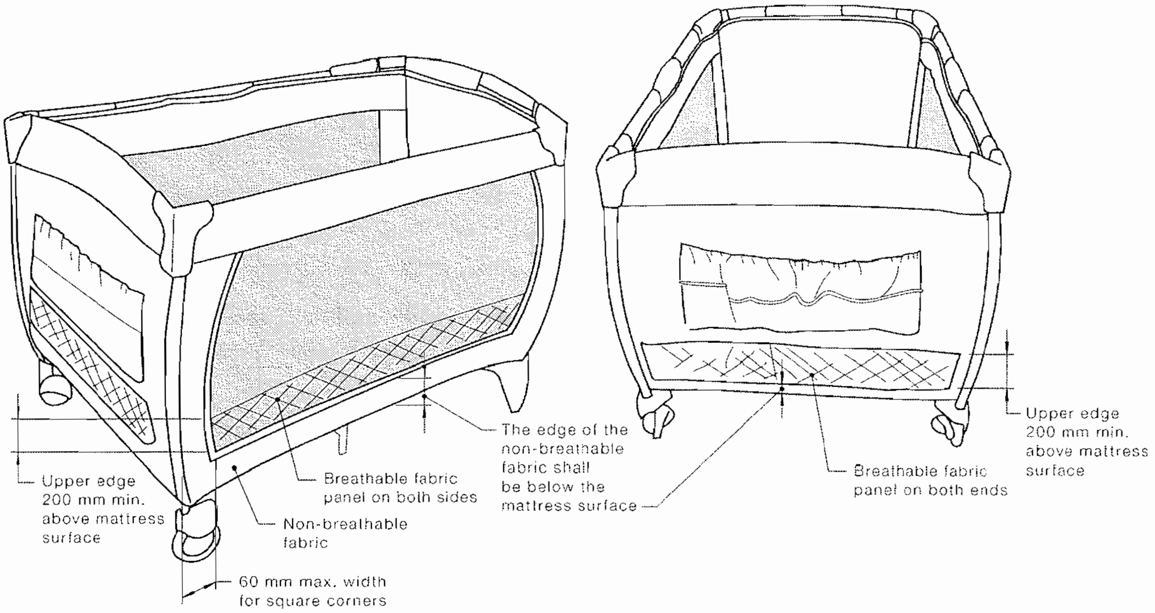
    (iii) Non-breathable material in the breathable zone is permitted for structural purposes only and shall comply with the following:

        (A) Be vertical bands and have a width of not more than 60 mm with a separation of not less than 150 mm.

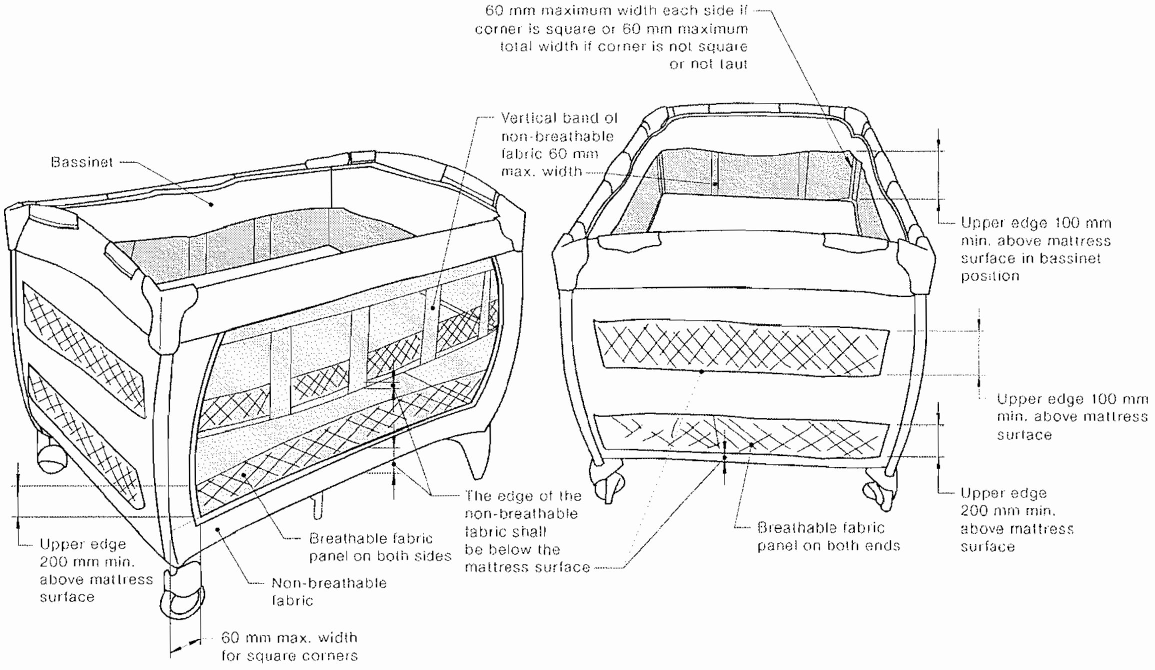
        (B) Have a width measured on the inside of the folding cot of not more than 60 mm on each side if it is at a corner and is square (approximating 90°).

        (C) Have a total width measured on the inside of the folding cot of not more than 60 mm if it is at a corner and is not square or if the material at the corner is not taut.

NOTE: It is considered that a sleeping occupant can assume a position anywhere on the mattress surface, thus all four sides require breathable zones.


The edge of the non-breathable fabric shall be below the mattress surface
Upper edge 200 mm min. above mattress surface
Breathable fabric panel on both sides
Non-breathable fabric
60 mm max. width for square corners
Breathable fabric panel on both ends
Upper edge 200 mm min. above mattress surface

(a) Folding cot without bassinet


60 mm maximum width each side if corner is square or 60 mm maximum total width if corner is not square or not taut
Bassinet
Vertical band of non-breathable fabric 60 mm max. width
Upper edge 100 mm min. above mattress surface in bassinet position
Upper edge 100 mm min. above mattress surface
The edge of the non-breathable fabric shall be below the mattress surface
Upper edge 200 mm min. above mattress surface
Breathable fabric panel on both sides
Non-breathable fabric
60 mm max. width for square corners
Breathable fabric panel on both ends
Upper edge 200 mm min. above mattress surface

(b) Folding cot with bassinet

FIGURE 1 BREATHABLE ZONE LOCATIONS ON FOLDING COTS

8.3 Footholds

There shall be no features of the folding cot sides or ends up to 400 mm above the level of the top surface of the mattress which present a potential foothold.

Potential foothold refers to the following:

(a) Fabric or mesh (or materials with openings for breathability) or structures of the folding cot that are on the outside, adjacent to a fabric or mesh panel of a folding cot's sides or ends. See Clause 10.13.

(b) A ledge or relief more than 15 mm wide and 5 mm deep.

(c) Any surface inclined at an angle of less than 55° to the horizontal.

NOTES:

1 The intention of this requirement is to reduce the possibility of child climbing and falling out of the folding cot. See also Clause 10.13.

2 The measurement of the depth of a potential foothold includes reliefs as well as ledges or components of reliefs and ledges.

3 The measurement of the angle of a potential foothold should be made from the deepest point.

8.4 Mattress and base

The following shall apply:

(a) The base shall be constructed of a rigid material and may consist of segments.

(b) The base shall be so designed as to provide a firm flat support for a mattress.

(c) The base shall not fold when the occupant stands in the folding cot. See Clause 10.21.

(d) All padding or cushioning material, including the mattress, shall be sufficiently firm to preclude its forming to the contours of the occupant's face, and shall comply with AS 2281, Type A, N Grade.

(e) A child lying in a folding cot or bassinet shall not cause the mattress and base to partially fold or create recesses where the padding or cushioning material, including the mattress forms around the face of the child.

(f) If a mattress is not provided in the folding cot packaging, the inner bottom of the cot (i.e. base) shall be padded so it is a combined mattress and base.

8.5 Locking mechanisms

8.5.1 *Locking device design*

All locking devices shall have a clearly distinct locked position.

NOTES:

1 This is intended to make it simple to tell that the folding cot is fully erected therefore lessening the chance of the cot inadvertently partially collapsing. While it is essential that locking mechanisms be secure and that their locked or unlocked status be unmistakable obvious, it is also important that they be easy to operate. Locking mechanisms that are difficult to engage are less likely to be properly operated.

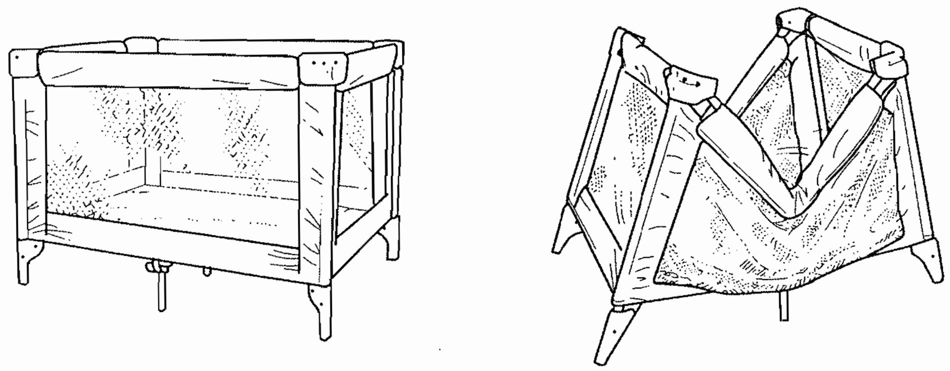
2 It is suggested that at least two locking devices are fitted in order to ensure that the folding cot does not totally collapse if one device fails. It is intended that children or infants should not be able to operate the folding mechanism.

8.5.2 *Folding mechanism design*

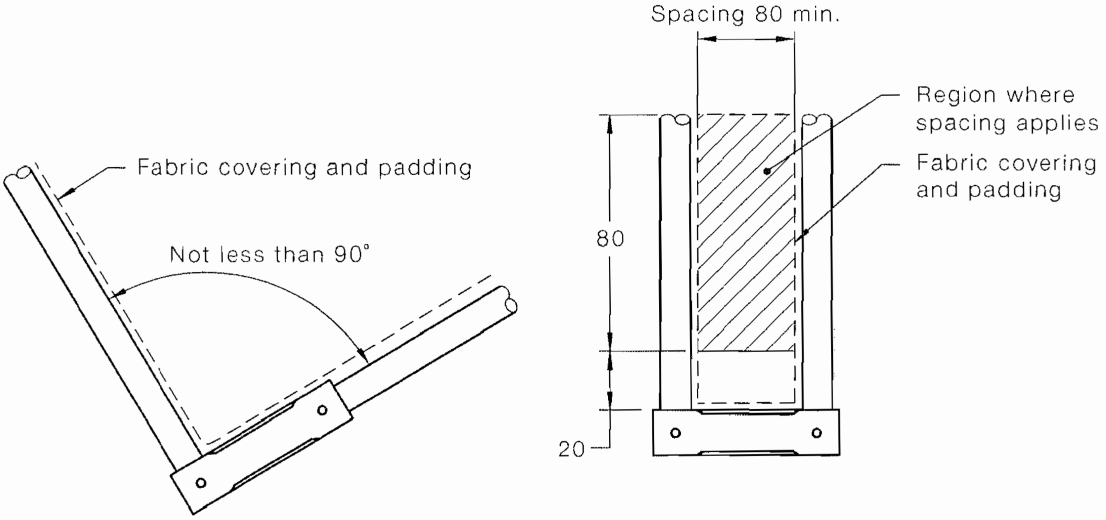
Any top rail folding mechanism shall be designed to eliminate or at least minimize 'V' shaped entrapment hazards when the frame folds. In the event of the failure of one locking device any resulting 'V' shape angle of entrapment shall be not less than 90° (see Figure 2(b)). In the event of failure of both locking devices the resulting entrapment dimension in the indicated region shall be not less than 80 mm including the fabric covering (see Figure 2(c)).

An example of folding mechanism design is shown in Figure 2(a).

NOTE: See Clause 10.14 for requirements.



(a) Example of a folding cot erected and with two sides unlocked creating a 'V' shape


Fabric covering and padding
Not less than 90°
Spacing 80 min.
Region where spacing applies
Fabric covering and padding
80
20

(b) Failure of one locking device

(c) Failure of two locking devices

DIMENSIONS IN MILLIMETRES

FIGURE 2 EXAMPLES OF LOCKED AND UNLOCKED FOLDING MECHANISM

8.5.3 *Activation of the folding mechanism*

The locking mechanism operating the folding mechanism of a folding cot shall be designed so that a child within the cot cannot open or activate the mechanism causing a full or partial collapse of the cot. Folding cots shall be equipped with at least two locking devices. For example this requirement may be complied with in one or more of the following ways:

(a) Two locking devices, separated by at least a distance of 850 mm.

(b) A system that requires at least two separate but simultaneous actions operating on different principles.

(c) A system of locking mechanisms that requires at least two consecutive actions operating on different principles, the operation of the second being dependent on the first having been carried out and sustained.

If the weight of the child on the base has a positive effect on locking, then this is accepted as one of the locking devices.

The force to release a locking mechanism in the top rail which starts to cause folding shall require force of at least 50 N before and after being tested in accordance with Appendix G. This force shall be measured with all other locking devices still engaged.

8.6 Castors or wheels

When the folding cot is fitted with castors or wheels, they shall be fitted with a brake on each castor or wheel to prevent unintentional movement.

8.7 Protrusions and gaps

Protrusions accessible to the child within the folding cot shall not be more than 5 mm unless they are so designed that they cannot snag onto clothing.

NOTE: The intention of Clause 8.7 is to ensure that protrusions and snag points on a folding cot do not present a means by which the child's clothing could snag and thereby present a strangulation hazard.

8.8 Sharp edges and sharp points

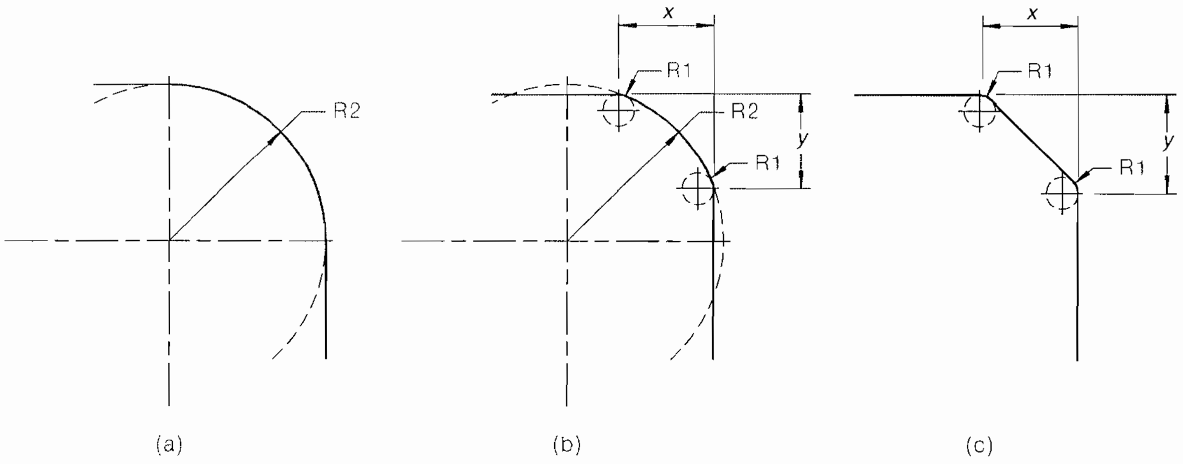
Unless covered by padding or not accessible to the child within the folding cot edges, protrusions or sharp points shall comply with the following:

(a) There shall be no protrusions within the folding cot that are accessible to the 95 mm diameter spherical probe specified in Appendix A unless they have a radius of at least 1 mm and not exceeding 5 mm in height.

(b) Edges within the folding cot and along the top of the folding cot that are accessible to the 95 mm diameter spherical probe specified in Appendix A shall have a radius of at least 1 mm or chamfered in accordance with Figure 3.

(c) Small components above the mattress base, such as hinges, brackets and catches, shall be free from burrs, hazardous sharp points and hazardous sharp edges. Potential sharp points and sharp edges shall be tested in accordance with the relevant requirements of AS/NZS ISO 8124.1.

NOTE: The intention of this Clause is to be ensure that the inside of a folding cot is free from protrusions and edges that could injure a child (especially its head) if the child fell or rolled onto the protrusion or edge.



(i) R1 shall be ⩾ 0.25 mm
(ii) R2, x and y shall be ⩾ 1 mm

DIMENSIONS IN MILLIMETRES

FIGURE 3 RADII AND CHAMFERING OF EDGES AND CORNERS

8.9 Textile, mesh and construction strength

The following requirements apply:

(a) Where the sides and undersides of the folding cot are constructed from textile material, they shall be sufficiently strong to prevent any opening that could pose a finger, limb or head entrapment hazard.

(b) Where textile materials are sewn together or joined by any other method they shall be sufficiently strong to prevent any openings that could pose a limb or head entrapment hazard.

(c) All stitching on the sides, ends and underside of the folding cot that are accessible to the child within the folding cot shall be lock-stitched or chain stitched and the key thread shall not be accessible to the child within the folding cot.

NOTES: See Clause 10.17 for requirements.

8.10 Accessories

Accessories that attach to the folding cot, e.g. bassinet (adjustable base), change tables (Clause 8.11) and mosquito nets (Clause 8.13), shall meet the requirements of this Standard. The accessory shall be tested fully with the cot in order to determine that it does not compromise safety. If an accessory, supplied as a separate product, has been tested with the cot and also complies with the requirements of the Standard, the manufacturer is required to state in the labelling supplied with the cot that the accessory is an approved accessory for use with that particular folding cot. The purpose of this is to specify and inform the consumer of those accessories suitable for use with a particular product that will not compromise the safety of the cot. In addition to this, labelling is required to tell the consumer not to purchase accessories unless recommended by the manufacturer.

8.11 Bassinets

In addition to the requirements of Clauses 8.1 to 8.9 that are applicable to bassinets, the following shall apply:

(a) Any textile material shall not be able to be formed into a pocket that could cover a child's face and pose a suffocation hazard.

(b) All padding or cushioning material, including the mattress and base, shall be sufficiently firm to preclude its forming to the contours of the occupant's face.

(c) The base shall be constructed of rigid material, and if it consists of segments, shall not fold or separate when the occupant lays on the surface.

(d) The mattress and base shall fit snugly as required by Clause 8.1(c). Any gap between rigid segments or components, and any gap between the edge of the mattress and base shall be avoided or made sufficiently small to prevent a baby, sliding under the mattress or base.

8.12 Change table

A change table that is suitable for the folding cot shall not create a head entrapment hazard for a child inside the folding cot or allow the child to fall.

To prevent a baby on the change table falling or a child inside the folding cot being strangled the following shall apply:

(a) Where a change table is secured to the portable cot, the change table shall be attached to the frame of the folding cot in such a way that it cannot be dislodged inadvertently when the child is on the change table. See Clause 10.18 for test requirements.

(b) Where a change table is not attached to the folding cot and is engaged with the top of the folding cot, it shall be designed to prevent it from becoming dislodged inadvertently when the child is on the change table. See Clause 10.18 for test requirements.

(c) A change table may be fitted with a means of securing the change table that can be engaged either manually or automatically to prevent it from sliding or rotating.

(d) A change table shall have a harness to secure the occupant, equipped with a buckling device or engaging method.

(e) The change table shall be a box-like structure with barriers on all sides that are at least 70 mm high from the lying surface, and inclined at an angle not greater than 135° from the lying surface.

(f) There shall be no material or strap on the underside of the change table that can create a pocket or loop having an opening perimeter greater than 360 mm when measured under a tension of 25 ±2 N.

NOTE: In Clause 10.2 and Appendix A, the potential of entrapment gaps for a child inside the cot are evaluated for gaps that can be created by the change table structure and the top rails of the folding cot when there is no baby on the change table.

8.13 Mosquito net

A mosquito net shall be designed in such a way that it can be fitted securely over the entire top railing and provided with sufficient overlap on all sides. See Clause 10.19 for test requirements.

9 LABELS OR TRANSFERS

Labels and transfers shall not be capable of being removed or torn off by a child without the use of a tool. Labels shall be applied by one of the following methods:

(a) Sewn along all edges of the label.

(b) Adhered or welded on all edges of the label.

(c) Adhered or welded across the whole back of the label.

(d) Any other method that ensures all edges are attached to the fabric or structure.

(e) Sewn, adhered or welded along one edge provided any warning notice is printed on the front and reverse side of the label.

NOTE: Labels that do not carry a warning notice and are attached on one edge may be printed on the front side only.

(f) Attached securely by at least 2 screws, rivets or similar fasteners with heads that are sufficiently large.

NOTES:

1 For the purpose of this Clause, a tool may be a pair of scissors, a scraper, a screw driver, a needle or other sharp implement that may assist in unpicking stitching or removing the label.

2 This requirement is intended to minimize the risk of a child peeling off parts of the transfer or label that could be inhaled, swallowed or placed over the mouth and nose.

10 SAFETY AND PERFORMANCE REQUIREMENTS

10.1 General

The applicable tests specified in Clauses 10.2 to 10.21 shall be performed in sequence and on the same folding cot in all possible configurations as appropriate. Clause 10.15 applies where there is an accessory such as a bassinet intended to be used with the folding cot.

It may be necessary to repeat earlier tests to fully evaluate the product, i.e. entrapment hazard, ingestion of broken parts hazard.

The entrapment hazard test (Clause 10.2) shall be repeated after the last test in the sequence.

Unless otherwise stated the folding cot shall be assembled or erected according to the manufacturer's instructions.

10.2 Entrapment hazard test

When tested in accordance with Appendix A, all holes and gaps within the folding cot shall be—

(a) sufficiently large as to allow the 50 mm diameter probe to enter but not allow the 95 mm diameter spherical probe to pass through; or

(b) sufficiently large as to allow the 12 mm diameter cylindrical probe to enter but not allow the 30 mm diameter probe to enter; or

(c) sufficiently small as to not to allow the 5 mm diameter cylindrical probe to enter to a distance of at least 10 mm unless it allows lateral movement of the probe by at least 20 mm in any direction.

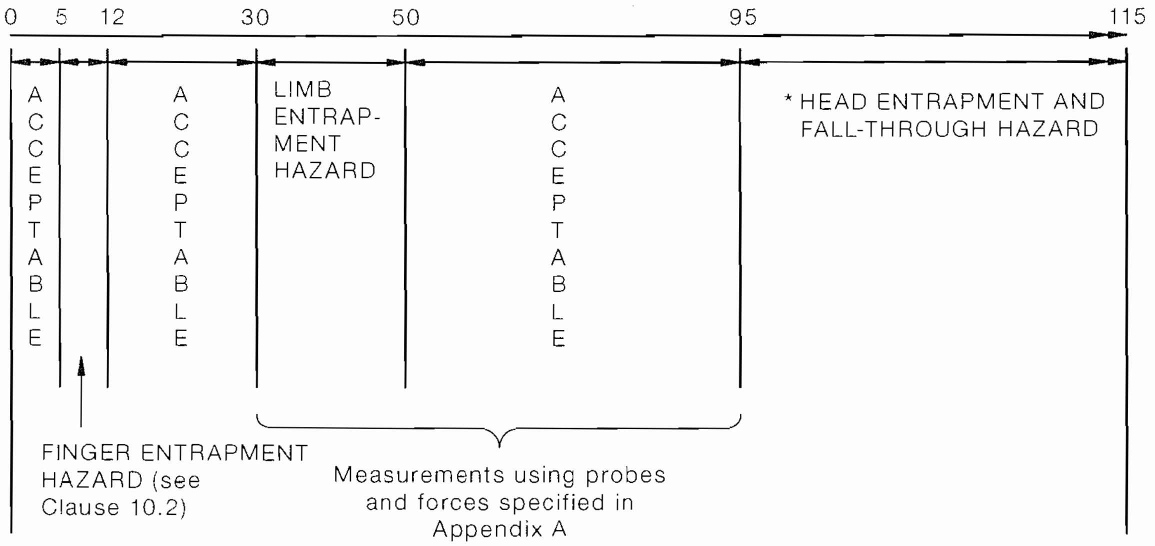
If a gap between the top rail of the folding cot, and the edge of a bassinet, change table, canopy or mosquito net, fitted in accordance with the manufacturer's instructions, allows the 95 mm diameter spherical probe to pass through, it shall be sufficiently large as to allow Probe B to pass through but not to allow Probe A to pass through.

NOTES:

1 When the textile material is constructed of mesh refer to Clause 10.12 for the test and test requirement which ensures that mesh holes do not stretch or break at the seam or in the fabric.

2 Figure 4 is a linear representation of gap sizes that pose entrapment hazards.

3 Clauses 8.1, 8.5.2 and 10.12 specify the dimensions of other gaps.


0
5
12
30
50
95
115
ACCEPTABLE
ACCEPTABLE
LIMB ENTRAPMENT HAZARD
ACCEPTABLE
* HEAD ENTRAPMENT AND FALL-THROUGH HAZARD
FINGER ENTRAPMENT HAZARD (see Clause 10.2)
Measurements using probes and forces specified in Appendix A

* Includes gaps 115 to 223 mm that are adjacent to the upper side rails or frame of the folding cot that are at a height of not greater than 400 mm from the mattress base. See Clause 10.2.

DIMENSIONS IN MILLIMETRES

FIGURE 4 LINEAR REPRESENTATION OF HAZARDOUS OPENINGS

10.3 Stability test

When tested in accordance with the stability test in AS/NZS 2172 using the mattress and base supplied, no legs of the folding cot shall lift off the floor.

10.4 Strength test

When tested in accordance with Appendix B, no components of the folding cot shall suffer any breakage, permanent deformation, joint failure or any structural damage affecting safety or function.

10.5 Folding test/frame test

When tested in accordance with Appendix C, the folding cot shall not fold, and no element of the folding cot shall suffer any breakage, joint failure or any structural damage affecting safety or function. No part of the frame shall have any permanent deflection greater than 50 mm. All locking mechanisms shall remain operational.

10.6 Impact test

When tested in accordance with Appendix D, no components of the folding cot shall suffer any breakage, permanent deformation, failure or any structural damage affecting safety or function. All locking mechanism shall remain operational.

10.7 Strength of frame and fastenings—Fatigue test

When tested in accordance with Appendix E, no components of the folding cot shall suffer any fracture, permanent deformation or failure, or any structural damage affecting safety of function.

10.8 Strength of frame and fastenings—Vertical static load test

When tested in accordance with Appendix F, no components of the folding cot shall suffer any fracture, permanent deformation, or any structural damage affecting safety of function.

10.9 Locking mechanism test

For cots in which the release of a top rail locking mechanism automatically activates the folding mechanism, when tested in accordance with Appendix G, the residual force to release the top rail locking mechanism shall be not less than 50 N. After testing, the top rail mechanism shall continue to comply with Clause 8.5.

NOTE: The intention of this Clause is that a child should not be able to release a locking mechanism as at least 50 N force is needed.

10.10 Detachable parts test

When tested in accordance with Appendix H, any part that can be detached shall not fit wholly within the test cylinder.

10.11 Bite test

If the folding cot has a padded rim, when tested in accordance with Appendix I, the textile material covering the rim shall not be cut or punctured. Marking of the surface, such as a dent, shall not constitute a failure.

10.12 Test for opening in fabric and mesh

When tested in accordance with Appendix J the following apply:

(a) The openings in mesh or other breathable fabric used in the breathable zones as required by Clause 8.2, shall accept the 1.5 mm diameter test probe when applied with a force of not greater than 10 N.

(b) The openings in mesh or other breathable fabric used in the breathable zones as required in Clause 8.2 and anywhere else on the sides and ends of the folding cot or bassinet, shall not accept the 5 mm diameter test probe when applied with a force of 30 N.

In addition, no seam shall loosen as a result of the force of the probe and no threads of the mesh or breathable fabric shall break.

10.13 Mesh foothold test

The following apply when mesh and adjacent structures are tested in accordance with Appendix K:

(a) For a surface inclined at less than 55° to the horizontal, the template shall not be able to be positioned with four or more adjacent marked triangles in simultaneous contact with the surface or the projected area.

(b) For a surface inclined at less than 55° to the horizontal, the template shall not be able to be positioned such that a line of contact or projection can be obtained extending between the two thicker markings on the template.

(c) For a surface inclined at between 55° and 80°, the template shall not be able to be positioned such that there is an area or line of contact or projection as described in Item (a) or (b) above, and so that there is a point of support on any surface that is no further away than the width of the template. This test shall be applied to the internal sides and ends of the folding cot up to 500 mm above the top surface of the mattress.

10.14 Folding side entrapment test

When tested in accordance with Appendix L, there shall be no gaps between any elements of the side rails of the cot where the side elements are inclined to each other at an angle of less than 90 degrees or which are less than 80 mm wide when measured at the 80 mm region between 20 mm and 100 mm from the lowest point of the gap.

NOTE: The intention of this requirement is to ensure that if the sides of a cot begin to fold while a child is present in the cot that no entrapment points are formed in the folding sides which could lead to strangulation or injury.

10.15 Folding cots with accessories

Accessories fitted to folding cots, shall resist being accidentally dislodged. When tested in accordance with Appendix M, the mattress, base and any bassinet shall not become separated from the folding cot in any specified assembly arrangement.

NOTE: Refer to Clause 10.18 for change tables used with folding cots and Clause 10.19 for mosquito nets.

10.16 Folding cots with castors or wheels

When tested in accordance with Appendix N, the brake on castors or wheels shall neither disengage nor allow any castor or wheel to rotate more than 180° when the cot is subjected to a horizontal force of 100 N.

10.17 Textile material attachment test

When tested in accordance with Appendix O, textile material attached to the frame of a folding cot shall not produce any opening.

10.18 Security of change table

With the folding cot frame secured to the floor the change table shall not be dislodged such that the change table is no longer fully supported when a force of 100 ±5 N is applied to the centre of any side.

For change tables that rotate about a hinge on one side when tested in accordance with Appendix A using a force of 100 N applied to the opposite side of the change table such that the change table is caused to rotate upwards there shall be no head entrapment hazards. A change table shall not create a gap between the frame of the change table and the top rail of the portable cot the gap such that it accepts a 95 mm spherical probe.

10.19 Security of mosquito nets

When tested in accordance with Appendix P, a mosquito net shall—

(a) support the test mass;

(b) maintain an overlap of at least 200 mm to the top rail on all sides; and

(c) not move up any side of the folding cot by more than 200 mm.

10.20 Toys

Toys and battery-operated devices (if provided) shall comply with the relevant requirements of AS/NZS ISO 8124.1 and AS/NZS ISO 8124.3.

10.21 Mattress and base deflection test

When tested in accordance with Appendix Q, the mattress and base fitted in any configuration in accordance with the manufacturers instructions, shall comply with the following:

(a) The mattress and base shall not deflect more than 40 mm at the centre, or not more than 25 mm at any other part of the mattress surface when the test mass is applied.

(b) The gap between the sides or ends of the bassinet, or folding cot and the edge of the mattress and base shall not accept the 50 mm diameter probe.

11 PLASTIC PACKAGING

Flexible plastic packaging or wrapping which is a bag; is capable of being formed into a bag; or is capable of forming an opening with a circumference of 350 mm or more and a depth of 130 mm or more, shall be either—

(a) perforated with round holes of at least 5 mm in diameter (or other shaped holes of equivalent area) so that when the whole of a square template (measuring 150 mm along each side) is placed anywhere on the packaging the template will completely cover at least one of the perforation holes; or

(b) made from plastic material that has a thickness of 38 μm or more and carries a cautionary label similar to the following:

WARNING: TO AVOID DANGER OF SUFFOCATION TO BABIES AND CHILDREN, DISPOSE OF PLASTIC PACKAGING IMMEDIATELY.

NOTES:

1 The dimensions of 350 mm and 130 mm are measured after the packaging has been spread out (without distorting) to its fullest extent.

2 Plastic bags that are not a danger to children, i.e. those in accordance with this Clause and meant to be a permanent aid to packaging and carrying the folding cot, need not carry this warning.

12 PRINTED INSTRUCTIONS

12.1 Information provided on leaflet

Printed instructions shall be supplied with the folding cot for its safe use, operations and maintenance.

Each folding cot shall include the following information in English on a leaflet in the folding cot package:

(a) The front cover of the instruction leaflet shall display prominently the following important message:

IMPORTANT

BEFORE ASSEMBLING THIS COT READ AND UNDERSTAND THE INSTRUCTIONS.

Do not use mattress other than the one supplied by the manufacturer. Incorrect mattress can cause death.

Use only accessories as recommended by the manufacturers.

Ensure the top rails and base are fully locked.

Stop using this cot if any part of the cot is broken, torn or missing.

KEEP THESE INSTRUCTIONS IN A SAFE PLACE FOR FUTURE REFERENCE.

(b) Instructions concerning the manufacturer's recommended use positions and correct and safe assembly of the folding cot.

NOTES:

1 Instructions encompass those for the use of any accessories recommended by the manufacturer for use with the folding cot.

2 Leaflets should include illustrative instructions demonstrating assembly and locking procedures including how to attach the accessory to the folding cot.

(c) Instructions for checking that the assembly of the folding cot is correct and safe.

(d) Instructions for checking that the locking device(s) is/are fully engaged.

(e) An assembly drawing, a list and description of all parts and tools required for assembly.

(f) Where necessary, a statement drawing attention to the need to carry out the assembly of the folding cot in a particular order.

(g) Where necessary, a statement drawing attention to the need to secure, tighten and maintain all fastening devices.

(h) The following warnings:

  (i) Include all warnings as per Clause 13.2.

  (ii) A statement to include at least the following warnings:

    (A) Keep children away while assembling/disassembling the cot.

    (B) Do not leave anything on the folding cot (such as toys) that provide a foothold.

    (C) Do not use the folding cot near naked heat sources, bar heaters, open fires or exposed flames.

    (D) Keep the folding cot clear of trailing cables and hanging cords.

    (E) Keep medication and small items that a child could choke on, away from the cot.

  (iii) A warning that folding cots with padded rims should not be used if the covering material has been bitten through.

  (iv) For folding cots with bassinets or other similar attachments that create an upper sleeping position, the following warning:

  WARNING:

    (A) TO PREVENT FALLS, THE BASSINET MUST NOT BE USED ONCE A CHILD CAN SIT UP.

    (B) NEVER PLACE A CHILD IN THE COT WHEN THE BASSINET IS IN PLACE.

  (v) A list of accessories including the manufactured models which have been approved for use with the folding cot.

(i) Instruction for the safe operation of the folding cot and accessories with any precautions required to prevent injury.

(j) The safety alert symbol (triangle) used required for marking may be used for instructions. (See Clause 13.2).

12.2 Information provided on packaging

Each folding cot shall include the following information on the external surface of the packaging:

IMPORTANT: Mattress is included and is designed specifically for this cot.

13 MARKING

13.1 General

13.1.1 *Identification of the folding cot*

In addition to any marking required by New Zealand and Australian Commonwealth, Territory and State legislation, folding cots shall be prominently, permanently and legibly marked with:

(a) For folding cots of Australian or New Zealand manufacturer—the manufacturer's or distributor's name and address.

(b) For folding cots not manufactured in Australia or New Zealand—

  (i) the country of origin; and

  (ii) the importer's or distributor's name and address as appropriate to the country that it is to be distributed in.

(c) A manufacturing batch number or similar identification.

NOTE: This information may be marked on the bottom of the portable cot, either on the inside or outside of the folding cot.

13.1.2 *Compatibility of folding cot components*

In addition to any marking in Clause 13.1.1, a means of identifying and matching removable parts and accessories of a folding cot with the correct mainframe shall be provided.

NOTES:

1 This can be the batch number or similar identification as in Clause 13.1.1(c).

2 This identification should be marked on any removable part that forms an integral part of the folding cot such as the base or a bassinet as well as on the cot mainframe. The intention of this Clause 13.1.2 is to ensure that, in situations where there is more than one folding cot, the parts can be matched correctly.

13.2 Safety warning

13.2.1 *General*

Safety warnings shown in Figure 5 to Figure 8 shall comply with relevant requirements of Clauses 13.2.2, 13.2.3, 13.2.4, 13.3 and 13.4, and shall be permanently and legibly marked on the folding cot or relevant accessories.

Unless otherwise specified in Clause 13.2.2, 13.2.3 and 13.2.4, wording shall be clearly legible in monoline, geometric lineale typeface of medium width characters not less than 2.5 mm high (see Note). The word **'WARNING'** shall be in bold, uppercase typeface.

(a) The word **'WARNING'** shall be in black and at least 5 mm high.

(b) The safety alert symbol shall be an equilateral triangle, at least 6 mm high with either—

  (i) a black fill and a white exclamation mark in the centre, as shown in Figure 5 to 7; or

  (ii) a black triangle and exclamation mark as shown in Figure 8 with a coloured or white background.

  At least one safety alert symbol shall be placed in front of the word **'WARNING'**.

(c) The word **'WARNING'** and safety alert symbol shall be printed on an orange or yellow background (reference Pantone colours '21c', and 'yellow C' or equivalent), on a rectangular area of at least 9 mm high × 50 mm wide.

(d) The main background shall be white and the bulleted statements shall be in black.

(e) The outer rectangular border is optional.

NOTE: Typeface descriptions of 'monoline', 'geometric', 'lineale' and 'medium width' are defined as follows:

(a) *Monoline*—any typeface in which all strokes of the letters are apparently of equal thickness.

(b) *Geometric*—lineale typeface in which all strokes of the letters are apparently of equal thickness.

(c) *Lineale*—typefaces without serifs (formerly called 'sans serif').

(d) *Medium width*—the width which the manufacturer (of the type) puts forward under the name of the family (i.e. the group of typefaces that is derived from one basic design) as representing the design in that normal width from which variants in the family have been or may be derived.

13.2.2 *Folding cot top rail warning*

The warning shown in Figure 5 shall be marked on the folding cot as follows:

(a) The warning shall be marked on the inside surface of the top rail of the folding cot.

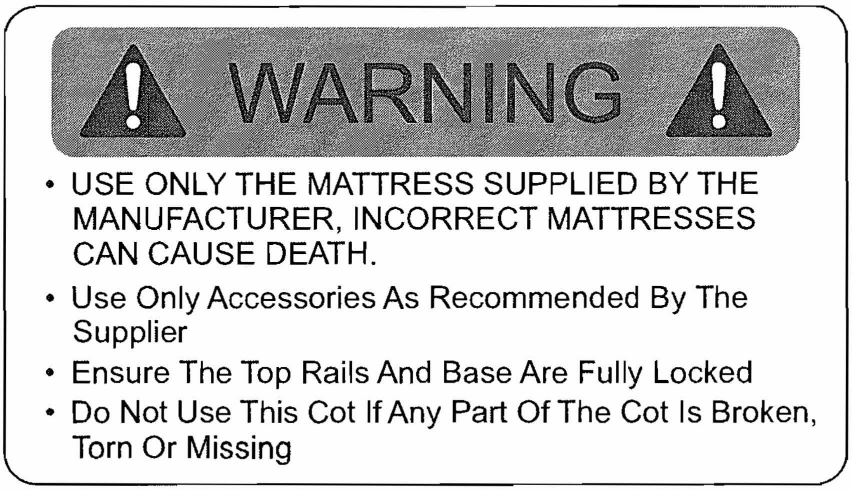
(b) The upper edge of the warning graphics shall not be greater than 50 mm from the top edge of the top rail.

(c) If the folding cot is rectangular, the warning graphics shall be marked on two non-adjacent top rails; and the no part of the graphics shall be closer than 200 mm from the inside surface of an adjacent side of the folding cot.

(d) If the folding cot is round or elliptical, the warning graphics shall be marked on two locations directly opposite each other such that the separation between marking is greatest.

(e) If the available area on the inside surface of the top rail of the folding cot is inadequate to accommodate the warning graphics, in lieu of the requirements of items (a) and (b), a label that extends from the inside surface to an upward-facing surface of the top rail shall be permitted.

In addition to the specifications in Clause 13.2.1, except for the first bulleted statement, the rest of the bulleted statements can be in combined uppercase and lowercase.



⚠ WARNING ⚠

- USE ONLY THE MATTRESS SUPPLIED BY THE MANUFACTURER, INCORRECT MATTRESSES CAN CAUSE DEATH.
- Use Only Accessories As Recommended By The Supplier
- Ensure The Top Rails And Base Are Fully Locked
- Do Not Use This Cot If Any Part Of The Cot Is Broken, Torn Or Missing

FIGURE 5 TOP RAIL WARNING MARKING

13.2.3 *Bassinet warning*

The warning marking shown in Figure 6 shall be marked on each top rail of the bassinet.

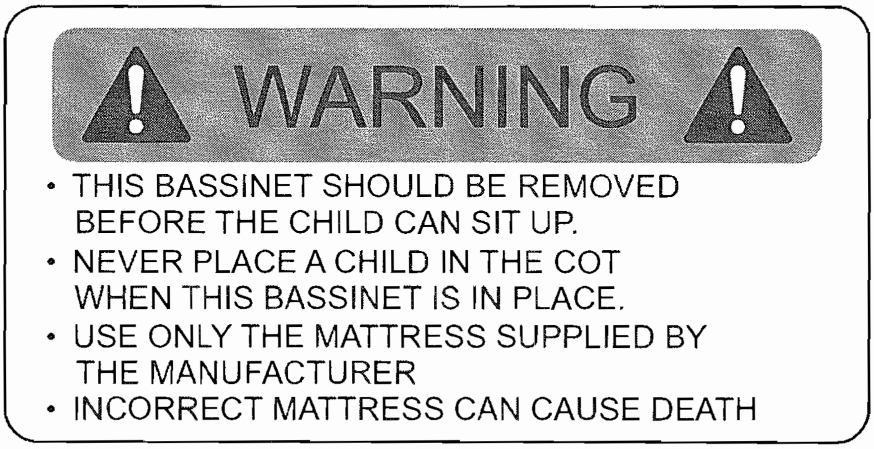

WARNING
• THIS BASSINET SHOULD BE REMOVED BEFORE THE CHILD CAN SIT UP.
• NEVER PLACE A CHILD IN THE COT WHEN THIS BASSINET IS IN PLACE.
• USE ONLY THE MATTRESS SUPPLIED BY THE MANUFACTURER
• INCORRECT MATTRESS CAN CAUSE DEATH

FIGURE 6 BASSINET WARNING MARKING

13.2.4 *Change table warning*

The warning shown in Figure 7 shall be marked on the top surface of the change table.

For change tables that can be attached upside down, the underside of the change table shall be marked to the effect that it must be refitted prior to use. This marking shall be in the form of a warning using the requirements of Clause 13.2.1.

NOTE: This warning is intended to alert users if the change table is fitted upside down. It is suggested that the change table is manufactured in such a way that it can only able to fitted in one position.

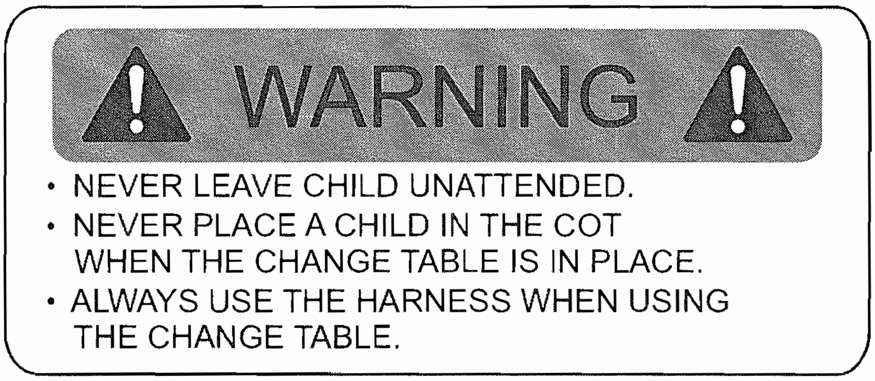

WARNING
• NEVER LEAVE CHILD UNATTENDED.
• NEVER PLACE A CHILD IN THE COT WHEN THE CHANGE TABLE IS IN PLACE.
• ALWAYS USE THE HARNESS WHEN USING THE CHANGE TABLE.

FIGURE 7 CHANGE TABLE WARNING MARKING

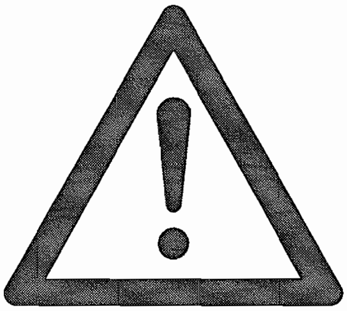


FIGURE 8 ALTERNATIVE SAFETY ALERT SYMBOL

13.3 Legibility of marking

Wording shall be clearly legible characters not less than 2.5 mm high for upper case letters unless otherwise specified in this Standard.

13.4 Durability of marking

The marking shall remain easily legible when rubbed by hand for 15 s with a piece of cloth soaked in water, allowed to dry and then rubbed for 15 s with a piece of cloth soaked with undiluted liquid domestic dishwashing detergent. Labels shall show no curling or lifting off the surface it is attached to.

NOTE: Manufacturers making a statement of compliance with this Joint Australian/New Zealand Standard on a product, packaging, or promotional material related to that product are advised to ensure that such compliance is capable of being verified.

APPENDIX A

ENTRAPMENT HAZARD TEST

(Normative)

A1 SCOPE

This Appendix sets out a method for testing a folding cot for finger, limb and head entrapment hazards posed by gaps that are accessible to the child within the folding cot.

NOTE: Clause 10.2 specifies the compliance requirements.

A2 PRINCIPLE

A series of probes are introduced into gaps accessible to the child within the folding cot and a force is applied to the probes to ascertain whether the gaps pose entrapment hazards.

NOTES:

1 The test in this Appendix is intended to reduce the possibility of injury to the child by ensuring that there are no gaps accessible to the child within the folding cot where any part of a child's body may become entrapped.

2 A 95 mm diameter spherical probe is used to find openings larger than 95 mm, which are considered dangerous from the point of view of head entrapment. Openings between 50 mm and 95 mm are considered relatively safe. It is the intention of these requirements to prevent a child's head becoming entrapped in a gap or the child's body slipping through a gap and being caught by the neck.

However, the gaps between the top rail of the folding cot and the edge of a bassinet, change table, canopy and mosquito net are permitted to be large. In this regard, Probe A is used in conjunction with Probe B to find openings that are not sufficiently large can pose a head entrapment hazard to a child that is capable of standing unaided.

A 30 mm diameter probe is used to find gaps large enough to trap a baby's arm or leg. Gaps smaller than 30 mm are considered relatively safe. However, gaps larger than 30 mm but less than 50 mm are considered dangerous as far as arm and leg entrapments are concerned. In this regard, a 50 mm diameter probe is used in conjunction with the 30 mm diameter probe to find openings between 30 mm and 50 mm.

12 mm and 5 mm cylindrical probes are used to find gaps that may trap fingers. Gaps between 5 mm and 12 mm that are shallower than 10 mm are considered relatively safe. However, if they are 10 mm or deeper and do not allow free lateral movement of the 5 mm probe to at least 20 mm, they can pose a finger entrapment hazard.

To simulate the weight or strength of a child, a force of 100 N is applied to the 95 mm diameter spherical probe and Probe A, and 50 N to the 30 mm diameter probe to ascertain whether the gap being tested will open sufficiently to allow the probe to pass through, thus becoming unacceptable. Likewise, a force of 10 N is applied to the 5 mm diameter cylindrical probe.

The sizes of the above probes are based on anthropometric data as well as the findings of enquiries into fatal cot accidents.

3 Figure 4 is a linear representation of gap sizes that pose entrapment hazards.

A3 APPARATUS

The following apparatus are required:

(a) A spherical probe made of suitable rigid material having the diameter of 95 ±0.5 mm.

The probe may be mounted on a rod of diameter not greater than 15 mm for the purpose of applying the specified force.

(b) Two cylindrical probes made of suitable rigid material with hemi-spherical end, an overall length of 150 mm and having the following diameters:

  (i) 50 ±0.5 mm.

  (ii) 30 ±0.5 mm.

  Each probe may be mounted on a rod of diameter not greater than 15 mm for the purpose of applying the specified force.

(c) Two cylindrical probes made of suitable rigid material with chamfered end, approximately 100 mm long and having the following diameters:

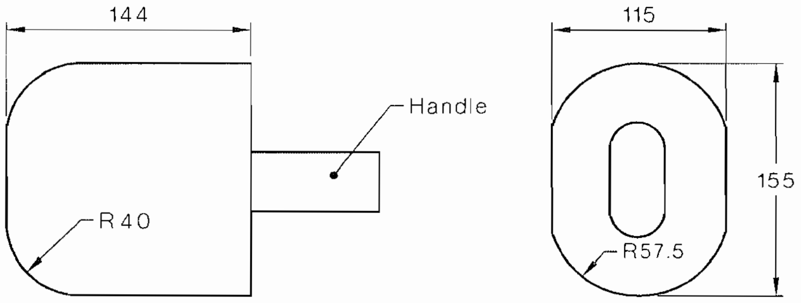
  (i) 12 ±0.1 mm.

  (ii) 5 +0.1, −0 mm.

  NOTE: The 5 mm probe dimensions align with Appendix J and are slightly different to the 5 mm diameter probe used in other standards.

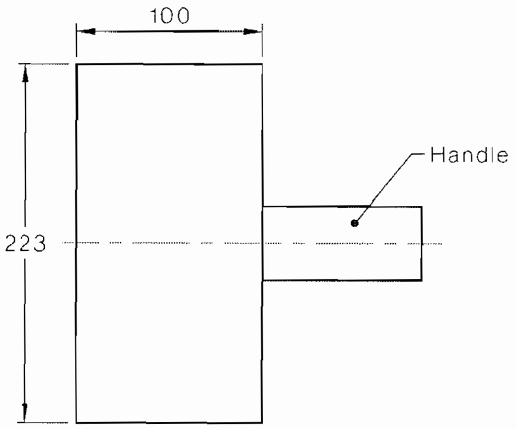
(d) Two probes, Probe A and B, as shown in Figures A1 and A2.

(e) A means of applying and measuring a force of up to 100 ±2.5 N.



DIMENSIONS IN MILLIMETRES

FIGURE A1 PROBE A



DIMENSIONS IN MILLIMETRES

FIGURE A2 PROBE B

A4 PROCEDURE

The procedure shall be as follows:

(a) Where applicable, assemble the folding cot in accordance with the manufacturer's instructions.

(b) Identify all gaps (including holes and openings) that are accessible to the child within the folding cot.

(c) To each of the identified gaps, insert the 95 mm diameter spherical probe and apply a force of 100 ±5 N in an effort to force the probe through.

(d) Record all the gaps that allowed the passage of the 95 mm diameter spherical probe.

(e) Record all the gaps that did not allow the passage of the 95 mm diameter spherical probe.

(f) To each of the gaps noted in Step (e), attempt to insert the 50 mm diameter probe with minimal force such that the passage of the probe is free and unimpeded.

(g) Record all the gaps that did not allow the free and unimpeded passage of the 50 mm diameter probe.

(h) To each of the gaps recorded in Step (g) insert the 30 mm diameter spherical probe and apply a force of 50 ±2 N in an effort to force the probe through.

(i) Record all gaps that allowed the passage of the 30 mm diameter probe.

(j) Record all the gaps that did not allow the passage of the 30 mm diameter probe.

(k) To each of the gaps noted in Step (j), attempt to insert the 12 mm diameter cylindrical probe with minimal force such that the passage of the probe is free and unimpeded (testing to exclude fabric or mesh).

(l) Record all the gaps that did not allow the free and unimpeded passage of 12 mm diameter probe.

(m) To each of the gaps noted in Step (l), insert the 5 mm diameter cylindrical probe and apply a force of 10 ±1 N in an effort to force the probe through.

(n) Record all gaps that allowed the passage of the 5 mm diameter cylindrical probe to a depth of at least 10 mm, and did not allow the probe to have free lateral movement of at least 20 mm.

(o) To each of the gaps that allowed the passage of the 95 mm diameter spherical probe noted in Step (d) that are between the top rail of the folding cot and edge of a bassinet, change table, canopy or mosquito net, insert Probe A with the flat side aligned with the top rail and apply a force of 100 ±5 N in an effort to force the probe through.

(p) Record all gaps that allowed the passage of Probe A.

(q) To each of the gaps noted in Step (p), insert Probe B with minimal force such that the passage of the probe is free and unimpeded.

(r) Record all gaps that allowed the passage of Probe B.

(s) If possible, assemble the folding cot in another arrangement, e.g. with the mattress base inverted, and repeat Steps (b) to (r).

NOTE: To ensure that the folding cot will perform satisfactorily under possible misuse, the folding cot is to be tested in all likely modes of assembly irrespective of whether the manufacturer intended the cot to be assembled in that mode, or whether the manufacturer provided a warning against incorrect assembly.

(t) Repeat Step (s) for all likely assembly arrangements.

(u) For change tables that rotate about a hinge on one side, assemble as described in the manufacturer's instructions, and engage any latch. Apply a force of 100 ±5 N to the opposite side of the change table such that the change table is caused to rotate upwards. Where change tables create a gap between the frame of the change table and the top rail of the folding cot insert the 95 mm spherical probe and apply a force of 100 ±5 N in an effort to force the probe through the gap created between the change table frame and the adjacent top rail of the folding cot for the entire arc of movement between the two components.

(v) Record all the gaps that allowed the passage of the 95 mm diameter spherical probe.

A5 REPORT

The following information shall be reported and, if appropriate, noted on a diagram of the folding cot:

(a) The gaps that were found to have failed the test by allowing the passage of the 95 mm diameter spherical probe as noted in Steps A4(d) and (v), except the gaps that did not allow the passage of Probe A as noted in Steps A4(q), and except the gaps that allowed the passage of Probe B as noted in Steps A4(r).

(b) The gaps that were found to have failed the test by allowing the passage of the 30 mm diameter spherical probe but not the 50 mm diameter spherical probe as noted in Steps A4(i) and A4(g) respectively.

(c) The gaps that were found to have failed the test by allowing the passage of the 5 mm diameter cylindrical probe to a depth of at least 10 mm, and did not allow the probe to have free lateral movement of at least 20 mm, and did not allow the passage of the 12 mm diameter cylindrical probe as noted in Steps A4(n) and A4(l) respectively.

(d) The gaps that were found to have failed the test by allowing the passage of Probe A as noted in Steps A4(q) but not Probe B as noted in Steps A4(r).

(e) Reference to this test method, i.e. AS/NZS 2195, Appendix A.

APPENDIX B

STRENGTH TEST

(Normative)

B1 SCOPE

This Appendix sets out a method for testing the strength of the textile material and corner post joints of a folding cot.

NOTE: Clause 10.4 specifies the compliance requirements.

B2 APPARATUS

The following apparatus is required:

(a) A means of measuring a force of 100 ±5 N.

(b) A rigid loading pad capable of transmitting a force of 100 N having a square or circular face with an area of 10 cm.

(c) A timing device.

(d) A means of securing the cot to the floor.

B3 PROCEDURE

The procedure shall be as follows:

(a) Where applicable, assemble the folding cot in accordance with the manufacturer's instructions.

(b) Securely clamp the folding cot to the floor.

(c) Apply a force of 100 ±5 N, for a period of 10 s, to the centre of each of the ends and sides of the folding cot, in an outward direction.

(d) Test each corner post of the folding cot as described in Step (c).

(e) Inspect the folding cot for breakage, permanent deformation or joint failure affecting safety or function.

(f) Repeat the entrapment hazard test procedure as set out in Appendix A.

B4 REPORT

The following information shall be reported and, if appropriate, noted on a diagram of the folding cot:

(a) Whether the folding cot suffered any breakage, permanent deformation, joint failure or any structural damage affecting safety or function, a description of the damaged component and the location.

(b) The results of the test procedure as set out in Paragraph A5 of Appendix A.

(c) Reference to this test method, i.e. AS/NZS 2195, Appendix B.

APPENDIX C

FOLDING TEST/FRAME TEST

(Normative)

C1 SCOPE

This Appendix sets out a method for testing whether the folding cot frame and folding mechanism will withstand forces applied to them and not result in unintentional activation of the folding mechanism.

NOTE: Clause 10.5 specifies the compliance requirements.

C2 APPARATUS

The following apparatus is required:

(a) A means of securing the folding cot to the floor without impeding the cot's normal folding action.

(b) A means of applying a measured force of 200 N and 450 N.

(c) A rigid loading pad capable of transmitting a force of 100 N having a square or circular area of 10 cm^2.

(d) A circular shaped object with a diameter of 210 ±10 mm and a thickness of 25 ±10 mm having a mass of 5 ±0.1 kg. The outer edges shall be rounded off with a radius of 10 ±5 mm.

NOTE: A 5 kg barbell weight would be suitable for this purpose.

C3 PROCEDURE

The procedure shall be as follows:

(a) Where applicable, assemble the folding cot in accordance with the manufacturer's instructions.

(b) Secure the folding cot to the floor so as not to impede the normal folding action.

(c) Apply a force of 200 ±5 N at any position on the folding cot frame and in all directions.

(d) Measure any permanent deflection and record any deflection in excess of 50 mm. Observe any damage that causes the frame to partially or fully fold.

(e) Repeat the procedure described in Step (c), but with the mass described in Paragraph C2(d) placed in any position on the mattress base of the folding cot that gives the most unfavourable test condition.

(f) Place the cot against the wall as shown in Figure C1 or alternatively in a test fixture as shown in Figure C2.

(g) Apply a force of 450 ±10 N perpendicular to the centre of the top rail over a 50 m section at an angle of 45° to the plane of the base of the folding cot. Apply the force gradually for 5 seconds and maintain for 10 seconds.

(h) Perform the procedure described in Steps (f) and (g) for each side of the folding cot.

(i) Measure any permanent deflection and record any deflection in excess of 50 mm. Observe any damage that causes the frame to partially or fully fold.

(j) Fold and then unfold the folding cot and observe whether the locking mechanisms are still operational.

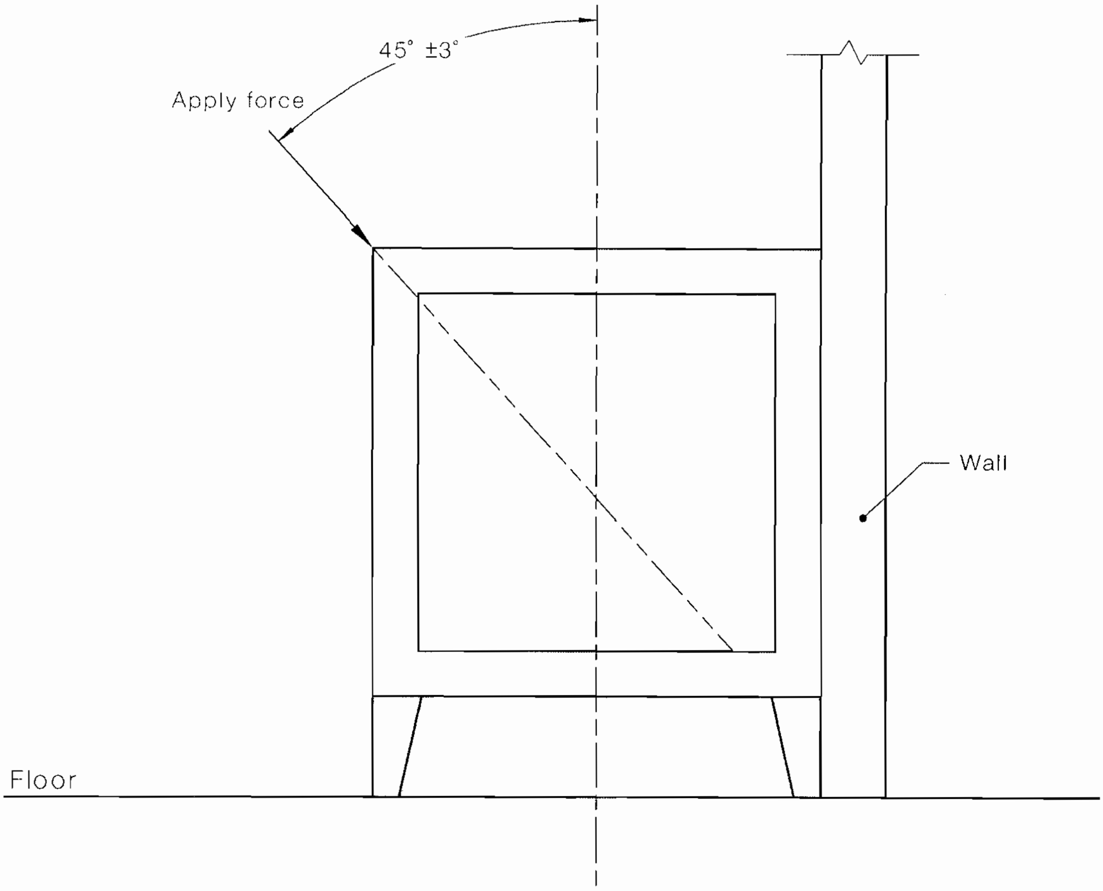


FIGURE C1 APPLICATION METHOD FOR APPLYING 450 N LOAD

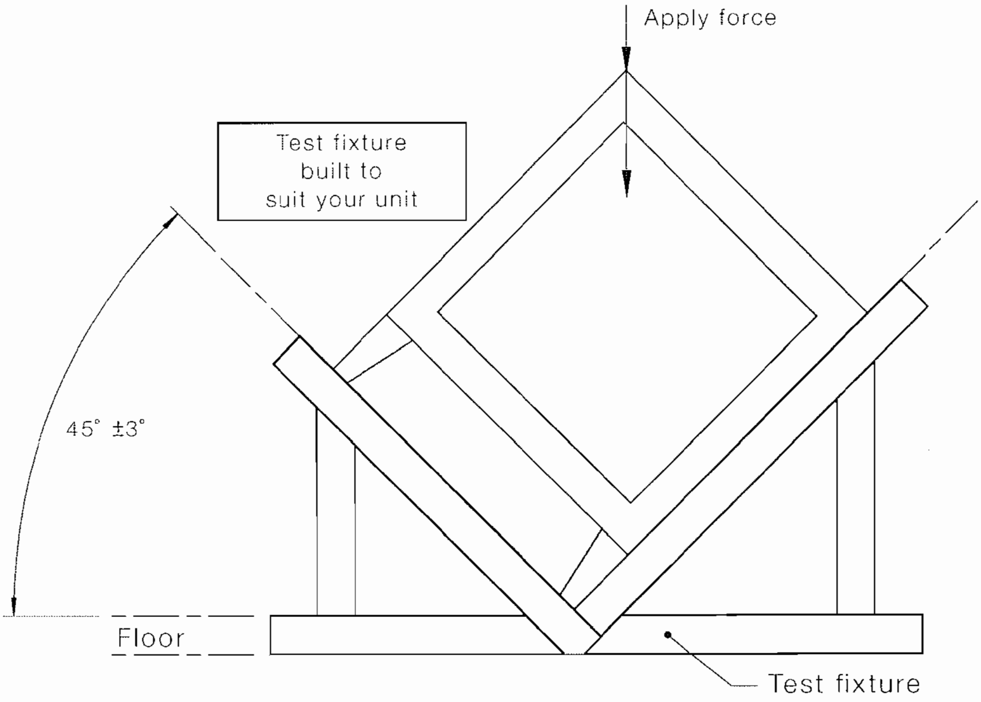


FIGURE C2 ALTERNATIVE METHOD FOR APPLYING 450 N LOAD

C4 REPORT

The following information shall be reported and, if appropriate, noted on a diagram of the folding cot:

(a) Whether the folding cot suffered any breakage, joint failure or any structural damage affecting safety or function, a description of the damaged component and the location.

(b) Whether the folding cot folded during the test.

(c) Whether any part of the frame had any permanent deflection in excess of 50 mm.

(d) Whether any locking mechanisms failed to function.

(e) Reference to this test method, i.e. AS/NZS 2195, Appendix C.

APPENDIX D

IMPACT TEST

(Normative)

D1 SCOPE

This Appendix sets out a method for testing the strength of a folding cot, particularly the mattress base and its ability to withstand repeated impacts and the ability of the folding mechanism to remain locked throughout the test.

NOTES:

1 Clause 10.6 specifies the compliance requirements.

2 If the folding cot includes a mattress, test with that mattress in place otherwise use the test mattress (D2(a)).

D2 APPARATUS

The following apparatus is required:

(a) A test mattress that complies with AS 2281 Type N classification, having a minimum density of 30 and a nominal hardness of 170. The test mattress shall not have any cover. The test mattress shall not be used for more than five specimens.

(b) An impactor with a mass of 10 kg of hardwood or equivalent material to dimensions as in Figure D1.

(c) A means of measuring in millimetres.

D3 PROCEDURE

The procedure shall be as follows:

(a) Where applicable, assemble the folding cot in accordance with the manufacturer's instructions.

(b) Place the supplied mattress or the test mattress (D2(a)) flat on the folding cot base and secure if required.

(c) Drop impactor (D2(b)) 1000 times, at not more than 30 times a minute through a distance of 150 mm above the base onto the test mattress at each of the selected positions of impact. Permit the impactor to fall freely.

NOTE: A guide rail to guide the impactor is recommended.

(d) The impacts shall be positioned as shown in Figure D2 points a to f, which are defined as follows:

a = any corner.

b = any place where the bottom appears weakest or, if no specific weak spot can be selected, in the corner diagonally opposite a.

c = the centre of one side.

d = the centre of one end.

e = the centre of the base.

f = any other corner.

The horizontal distance between the side of the impactor and the inner surface of the frame shall be not more than 150 mm at points a, c, d and f.

D4 REPORT

The following information shall be reported and, if appropriate, noted on a diagram of the folding cot:

(a) The number of times the weight was dropped before any component of the cot failed or permanently deformed or any fastening device or joint loosened or any locking mechanism failed during the test, up to and including 1000 drops.

(b) Whether any component of the folding cot broke or became permanently deformed.

(c) Whether any fastening device became loose, and if this affects safety or function.

(d) Whether any joint became loose, and if this affects safety or function.

(e) Reference to this test method, i.e. AS/NZS 2195, Appendix D.

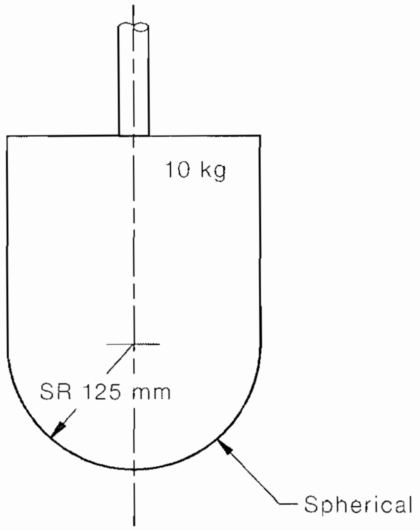
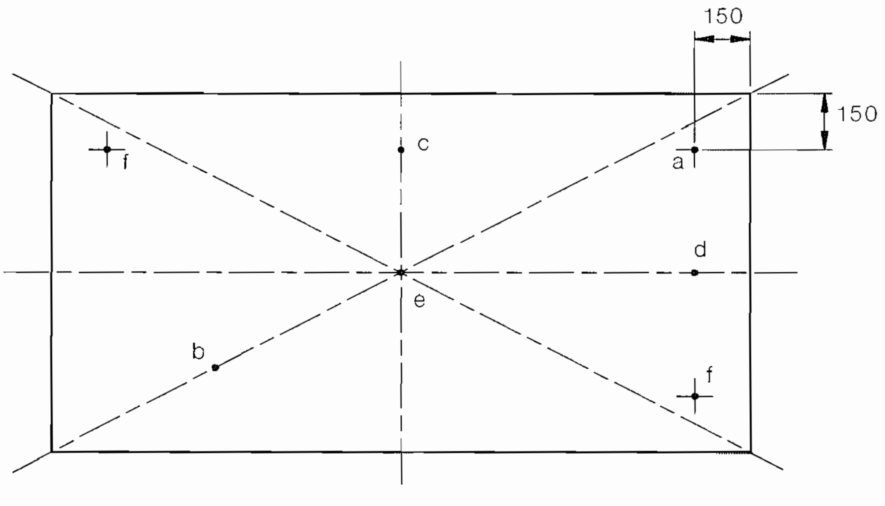


FIGURE D1 IMPACTOR



DIMENSIONS IN MILLIMETRES

FIGURE D2 IMPACT POINTS

APPENDIX E

STRENGTH OF FRAME AND FASTENINGS—FATIGUE TEST

(Normative)

E1 SCOPE

This Appendix sets out a method for testing the ability of the folding cot to withstand horizontal forces in order to simulate pushing the cot in normal use.

NOTE: Clause 10.7 specifies the compliance requirements.

E2 APPARATUS

The following apparatus is required:

(a) Stops, to prevent the article from sliding but not tilting, no higher than 12 mm except in cases where the design of the item necessitates the use of higher stops, in which case the lowest that will prevent the item from moving shall be used.

(b) A test load with a mass of 20 kg distributed over an area of approximately 150 mm × 150 mm.

(c) Four loading pads, consisting of a rigid cylindrical object 100 mm in diameter, having a smooth hard surface and rounded edges with a radius of 12 mm.

NOTE: Hardwood is advised for consistency of testing.

(d) A device that can press the folding cot in four directions horizontally, with two of the forces in the longitudinal direction and two in the lateral direction (AB/CD) opposite each other.

E3 PROCEDURE

The procedure shall be as follows:

(a) Where applicable, assemble the folding cot in accordance with the manufacturer's instructions.

(b) Position the cot on the floor with all the legs secured to the floor.

(c) Position the test load at the centre of the bottom of the folding cot.

(d) Apply forces of 100 N by means of the loading pads, and a device specified in Paragraph E2(d) that can press the cot in four directions horizontally, with two of the forces in the longitudinal direction and two in the lateral direction (AB/CD) opposite each other. The forces shall act for 2000 cycles on each point in turn in the order A, B, C, D or A-B followed by C-D (equalling one cycle) and each time the force shall increase from 0 to 100 N and back to 0 in not less than 1 s (see Figure E1).

(e) The points for applying the forces (A, B, C, D) shall be located 50 mm from the intersection point of the centre-lines of the side members at the highest point at that position (see Figure E2).

E4 REPORT

The following information shall be reported and, if appropriate, noted on a diagram of the folding cot:

(a) Whether any component of the folding cot suffered any fracture, permanent deformation or failure, or any structural damage affecting safety or function.

(b) Reference to this test method, i.e. AS/NZS 2195, Appendix E.

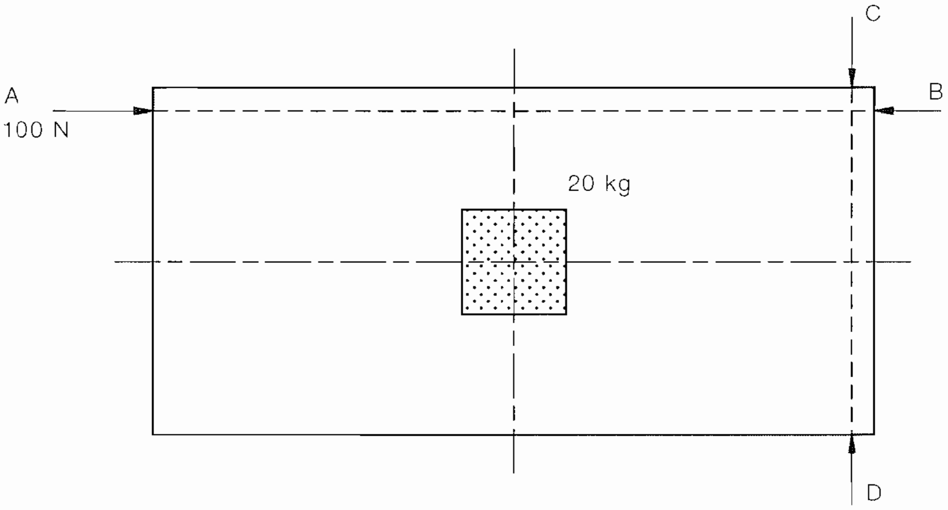
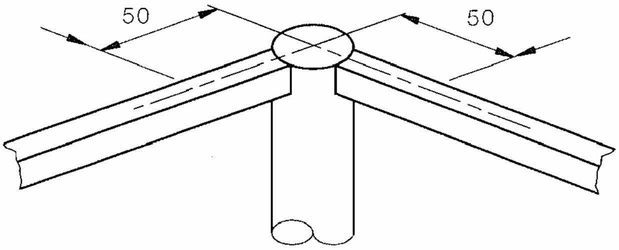


FIGURE E1 DEVICE SET UP FOR FATIGUE TEST



DIMENSIONS IN MILLIMETRES

FIGURE E2 POINTS FOR APPLYING FORCES FOR FATIGUE TEST

APPENDIX F

STRENGTH OF FRAME AND FASTENINGS—VERTICAL STATIC LOAD TEST

(Normative)

F1 SCOPE

This Appendix sets out a method for testing the strength of the folding cot frame, to withstand vertical forces.

NOTE: Clause 10.8 specifies the compliance requirements.

F2 APPARATUS

A means of applying a measured force of 500 N.

F3 PROCEDURE

The procedure shall be as follows:

(a) Where applicable, assemble the folding cot in accordance with the manufacturer's instructions.

(b) Apply a vertical downwards force FSV of 500 N or mass 50 kg, apply evenly over a distance of 80 mm as shown in Figure F1 to the top of the cot side 10 times. During each application, maintain the force for at least 10 s.

(c) All sides and ends of different construction shall be tested.

F4 REPORT

The following information shall be reported and, if appropriate, noted on a diagram of the folding cot:

(a) Whether any component of the folding cot suffered any fracture, permanent deformation or any structural damage affecting safety or function.

(b) Reference to this test method, i.e. AS/NZS 2195, Appendix F.

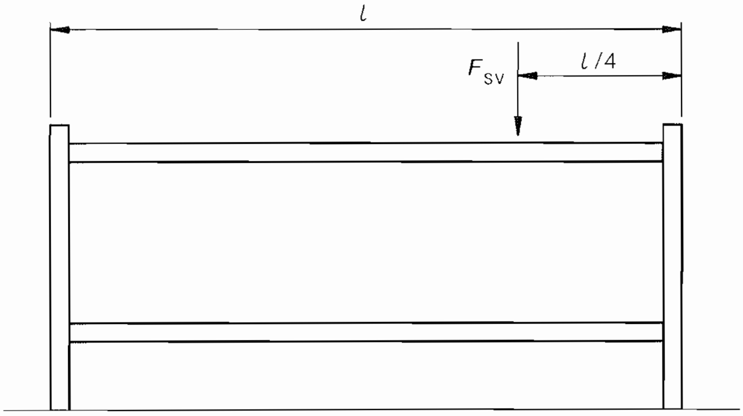


FIGURE F1 VERTICAL STATIC LOAD TEST

APPENDIX G

LOCKING MECHANISM TEST

(Normative)

G1 SCOPE

This Appendix sets out a method for testing the durability of the locking mechanism.

NOTE: Clause 10.9 specifies the compliance requirement.

G2 APPARATUS

Apparatus shall be a means of measuring an unknown force to an accuracy of ±5 N.

G3 PROCEDURE

The procedure shall be as follows:

(a) Where applicable, assemble the folding cot in accordance with the manufacturer's instructions.

(b) Operate (close and open) the locking mechanism and close and open the folding mechanism 300 times.

(c) Measure the residual force required to release the locking mechanism. In case of rotating elements, measure the tangential force.

G4 REPORT

The following information shall be reported and, if appropriate, noted on a diagram of the folding cot:

(a) The number of times the locking mechanism and folding mechanism were operated before either failure occurred, or the test was completed.

(b) Whether the residual force for operating the mechanism measured in Step G3(c) was 50 N or over.

(c) Reference to this test method, i.e. AS/NZS 2195, Appendix G.

APPENDIX H

DETACHABLE PARTS TEST

(Normative)

H1 SCOPE

This Appendix sets out a method for ensuring that any part that can be detached will not pose a hazard to a child.

NOTE: Clause 10.10 specifies the compliance requirements.

H2 APPARATUS

The following apparatus is required:

(a) A means of applying a measured force of 50 N.

(b) A means of applying a measured force of 90 N.

(c) A means of measuring in millimetres.

(d) A timing device.

(e) A test cylinder constructed as shown in Figure H1.

H3 PROCEDURE

The procedure shall be as follows:

(a) Where applicable, assemble the folding cot in accordance with the manufacturer's instructions.

(b) Apply a tensile force to the component to be tested through a clamp or by other means.

(c) Apply a force of—

  (i) 50 N when the largest accessible dimension is less than or equal to 6 mm.

  (ii) 90 N when the largest accessible dimension is greater than 6 mm.

  (iii) Apply the force gradually over 5 s and maintain for 10 s.

  (iv) If the component has become detached, place it in the test cylinder.

  (v) Examine whether the component fits wholly within the test cylinder.

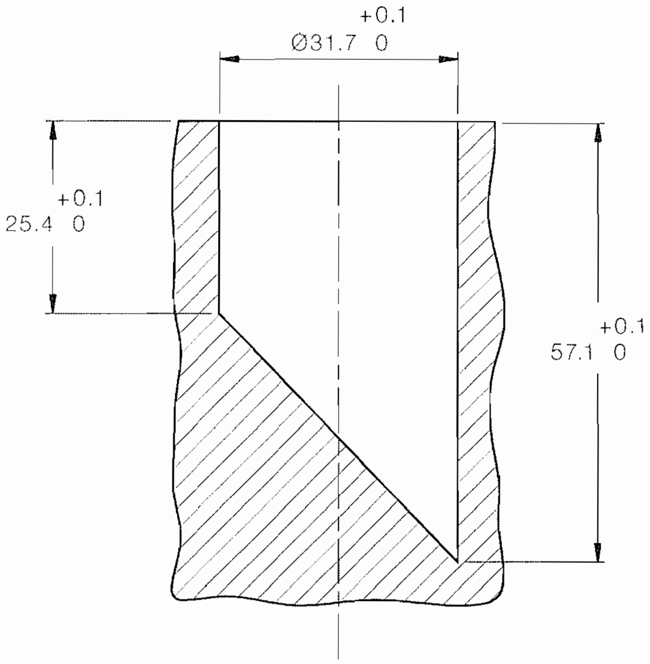
H4 REPORT

The following information shall be reported and, if appropriate, noted on a diagram of the folding cot:

(a) Description of any parts that detached when subjected to the forces detailed in Step H3(c).

(b) Description of any parts that fitted wholly within the test cylinder.

(c) Reference to this test method, i.e. AS/NZS 2195, Appendix H.



DIMENSIONS IN MILLIMETRES

FIGURE H1 TEST CYLINDER

APPENDIX I

BITE TEST

(Normative)

I1 SCOPE

This Appendix sets out a method of testing that determines whether the protective covering could be bitten through by a child.

NOTE: Clause 10.11 specifies the compliance requirements.

I2 APPARATUS

The following apparatus is required:

(a) A bite clamp as shown in Figure I1.

(b) A means of applying a force of 220 ±5 N over a period of 5 s and maintaining it for 60 s.

(c) A suitable timing device.

I3 PROCEDURE

The procedure shall be as follows:

(a) Where applicable, assemble the folding cot in accordance with the manufacturer's instructions.

(b) Position the material to be tested between the upper and lower plates of the bite clamp such that when a force is applied to the loading point, the teeth close and the effect would resemble a child's bite.

(c) Evenly and gradually apply a force of 220 ±5 N to the loading point in a direction perpendicular to the upper plate, over a period of 5 s and maintain it for a period of 10 s.

(d) Carry out the test at 10 locations around the rim of the folding cot that would be most likely to produce the poorest performances during the test.

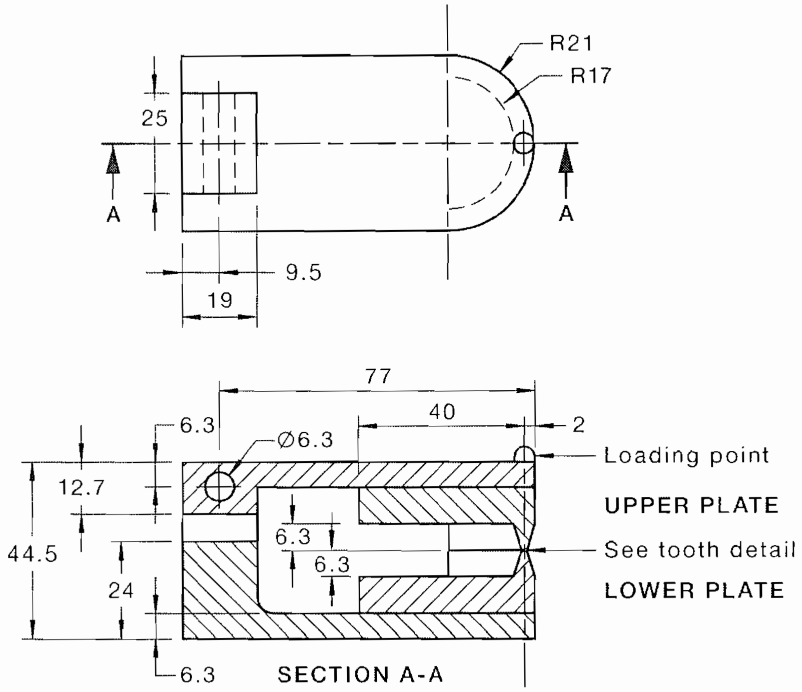
NOTE: Any labels attached to the rim of the folding cot should not be subjected to the test in this Appendix.

I4 REPORT

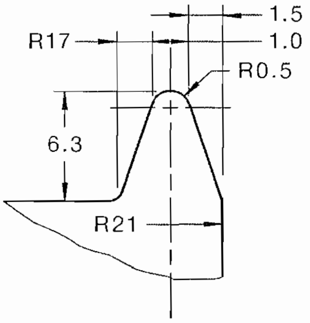
The following information shall be reported and, if appropriate, noted on a diagram of the folding cot:

(a) Whether the material was cut or punctured.

(b) Reference to this test method, i.e. AS/NZS 2195, Appendix I.



(a) Top view of upper plate and hinge



(b) Tooth detail

TOLERANCES:
(i) on tooth ±0.2 mm
(ii) on remainder of clamp ±0.4 mm
Materials hardened steel

DIMENSIONS IN MILLIMETRES

FIGURE I1 BITE TEST CLAMP

APPENDIX J

TEST FOR OPENING IN FABRIC AND MESH

(Normative)

J1 SCOPE

This Appendix sets out a method for testing the suitability of openings in fabric and mesh used in folding cot construction in both breathable zones and elsewhere.

NOTE: Clause 10.12 specifies the compliance requirements.

J2 APPARATUS

The following apparatus is required:

(a) Two probes as shown in Figure J1, made of smooth rigid material (e.g. PTFE), approximately 50 mm long, suitable for attaching to a force applying device at the flat end, and having the following diameters:

  (i) 1.5 +0.1, −0 mm

  (ii) 5 +0.1, −0 mm.

(b) A means of applying a measured force of a 10 ±0.5 N and 30 ±0.5 N.

(c) A means of measuring length in millimetres.

J3 PROCEDURE

The procedure shall be as follows:

(a) Where applicable, assemble the folding cot and any bassinet in accordance with the manufacturer's instructions.

(b) Attempt to insert the 5 mm diameter test probe into an opening in the mesh using a force of 30 ±2 N at the following locations:

  (i) As close to the rim as possible.

  (ii) As close to the base as possible.

  (iii) In the middle region of the side.

  (iv) At any other point on the folding cot likely to fail.

(c) Repeat Step (b) a further 9 times each on a different opening in the prescribed locations on any one side or any other side of the folding cot.

(d) Attempt to insert the 1.5 mm diameter test probe into an opening in the mesh or fabric in the breathable zones required by Clause 8.2 and shown in Figure 1 using a force of 10 N at the following positions:

  (i) 10 mm from the uppermost seam.

  (ii) 10 mm from the lowermost seam.

  (iii) In the middle region of the breathable zone.

  (iv) At any other point in the zone likely to fail provided the measurement is not taken within 10 mm of any seam or junction with another fabric.

NOTE: These tests apply to any textile material used in the zone except those that are permitted to be non-breathable in Clause 8.2.

(e) Repeat Step (d) a further 9 times each on a different opening in the prescribed locations on any one side or any other side of the folding cot.

(f) Repeat Steps (b) and (c), then (d) and (e) for the upper position of the folding cot and bassinet, if there is any.

J4 REPORT

The following information shall be reported and, if appropriate, noted on a diagram of the folding cot:

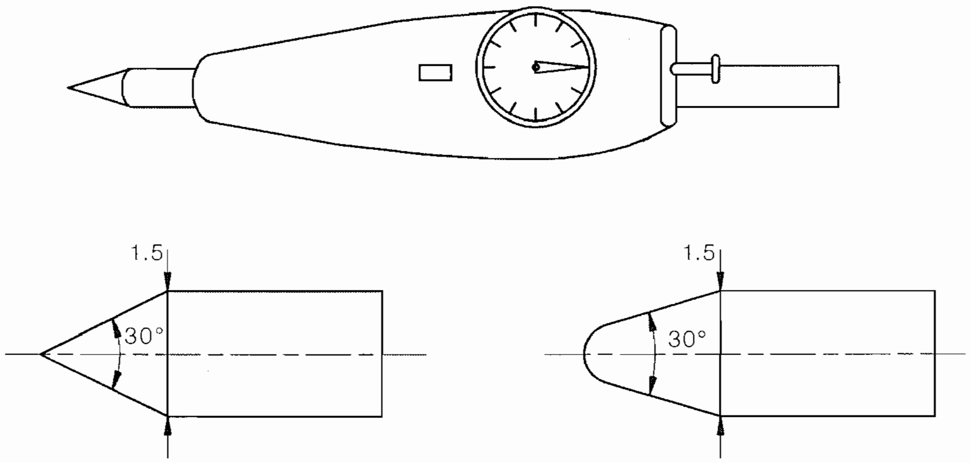
(a) Whether any threads of the mesh broke.

(b) Whether the 5 mm diameter test probe passed through the mesh in Steps J3(b) and (c).

(c) Whether any seams were loosened in Steps J3(b) and (c).

(d) Whether 1.5 mm diameter test probe failed to pass through the mesh in Steps J3(d) and (e).

(e) Reference to this test method, i.e. AS/NZS 2195, Appendix J.



DIMENSIONS IN MILLIMETRES

FIGURE J1 TEST PROBES

APPENDIX K

MESH AND ADJACENT COT STRUCTURE FOOTHOLD TEST

(Normative)

K1 SCOPE

This Appendix sets out a method for determining whether the internal sides and ends of the folding cot contain any footholds or toeholds that would enable a child to climb out of the folding cot.

NOTE: Clause 10.13 specifies the compliance requirements.

K2 APPARATUS

The following apparatus is required:

(a) A template consisting of a strip of rigid transparent material cut to the shape shown in Figure K2 marked on one side with the pattern as shown and with the following dimensions: thickness = 10 ±0.2 mm, width = 35 ±2 mm and radius = 2.5 ±0.2 mm. The template shall allow for the attachment of a force measuring device when necessary.

(b) A means of measuring angles in degrees.

(c) A means of applying a measured force of up to 30 N and 50 N.

K3 PROCEDURE

The procedure shall be as follows:

(a) Place the marked face of the template on any mesh vertical surface in the folding cot, including adjacent structure, up to 500 mm above the top surface of the base (including on surfaces that are not flat and surfaces formed by the two adjoining components).

(b) Press the template against the mesh material or structure or through any gap using a horizontal force not exceeding 30 N applied along the longitudinal axis of the template. This force shall then be combined with a vertical force of 50 N acting through points A or B (see Figure K2) which is nearest the foothold.

(c) Observe the surface through the template and note the extent of the area of contact with the marked face of the template. For a surface that is not flat, instead of the area of contact observe the projection of the surface into the template markings.

NOTE: The template should be viewed parallel to the line of vision. It may assist if both surfaces of the template are marked.

K4 REPORT

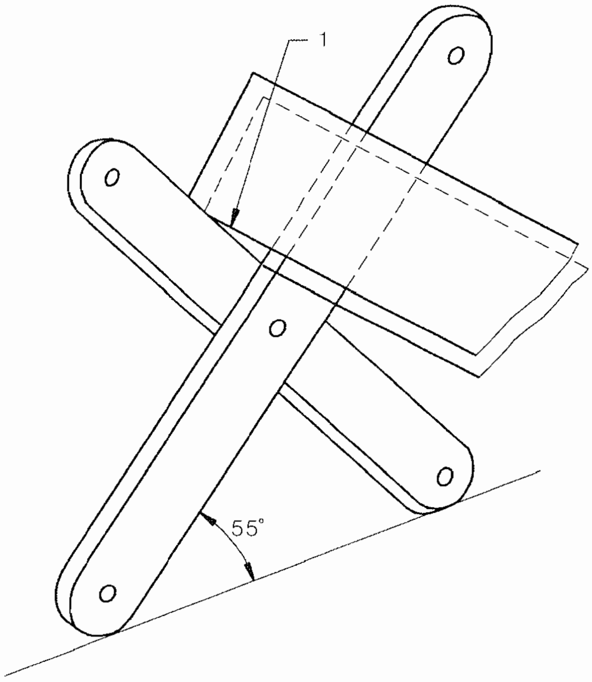
The following information shall be reported and, if appropriate, noted on a diagram of the folding cot:

(a) For a surface inclined at less than 55°, whether the template could be positioned with four or more adjacent marked triangles in simultaneous contact with the surface or the projected area or whether the template could be positioned such that a line of projection could be obtained extending between the two thicker markings on the template.

(b) For a surface inclined at between 55° and 80° to the horizontal, whether the template could be positioned such that there is an area or line of contact or projection as described in Paragraph K4(a) and whether there is a point of support on any surface that is no further away than the width of the template.

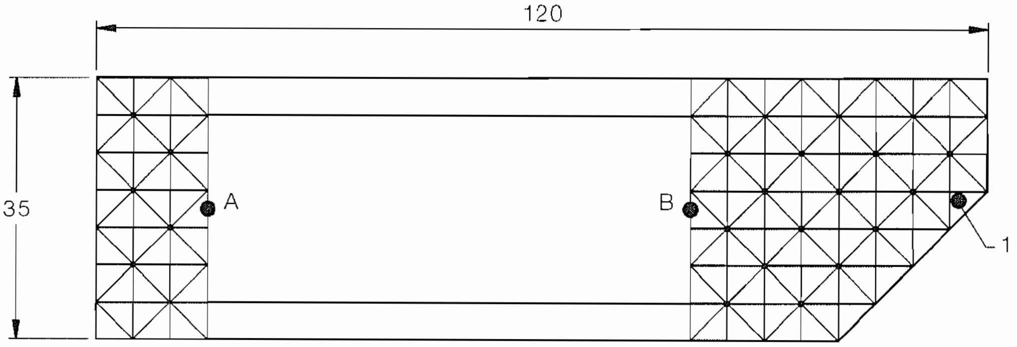
NOTE: If either of these two conditions is met, the folding cot fails the test by demonstrating that a foothold exists.

(c) Reference to this test method, i.e. AS/NZS 2195, Appendix K.



1 = Point of support on second surface

FIGURE K1 EXAMPLE OF FOOTHOLD ON TWO SURFACES INCLINED AT LESS THAN 55° TO THE HORIZONTAL



1 = Triangular cells plotted on a 5 x 5 grid

DIMENSIONS IN MILLIMETRES

FIGURE K2 TEMPLATE FOR FOOTHOLD

APPENDIX L

FOLDING SIDE ENTRAPMENT TEST

(Normative)

L1 SCOPE

This Appendix sets out a method for testing a folding cot for possible entrapment hazards in the sides of the folding cot. Testing for such hazards will be carried out with the folding cot fully erected and at any stage of partial erection, at which it might be possible for a child to be in the folding cot.

NOTE: Clause 10.14 specifies the compliance requirement.

L2 APPARATUS

The following apparatus is required:

(a) A means of applying a downward force of 50 N in the form of two 2.5 kg masses joined by a loop of string such that the stretched length of the loop is 200 mm. Two sets are required.

(b) A means of measuring angles in degrees.

(c) A circular shaped object with a diameter of 210 ±10 mm and a thickness of 25 ±10 mm having a mass of 5 ±0.1 kg. The outer edges shall be rounded off with a radius of 10 ±5 mm.

NOTE: A 5 kg barbell weight would be suitable for this purpose.

L3 PROCEDURE

The procedure shall be as follows:

(a) Assemble the folding cot according to the manufacturer's instructions, and place on a smooth firm floor, e.g. vinyl flooring tiles on a concrete base.

(b) Activate the release mechanisms on opposite sides of the folding cot, and allow the folding cot to begin to fold (see Figure L1). Ensure the base is locked.

(c) Place the mass described in Paragraph L2(c) on the base of the folding cot in any position.

(d) Suspend the two 2.5 kg masses, one inside and one outside the folding cot with the string loops passing over one released side of the folding cot, in the position that produces the maximum downward movement of the side of the folding cot. Attempt to spread the two sides of the loop of string as far apart as possible. (See Figure L2). Then apply a second set of masses in the same manner to the opposite side.

(e) Grasp each corner of the folding cot in succession with one hand and shake the folding cot until the lowered side does not move any lower.

(f) Measure the included angle between any two sections of the folded side of the folding cot, which would be considered to form an entrapment, at a point 100 mm from the bottom of the gap, without compressing the fabric.

(g) Measure the width of the gap between any two sections of the folded side of the folding cot that would be considered to form an entrapment, at the 80 mm region between 20 mm to 100 mm above the bottom of the gap, without compressing the fabric.

(h) Repeat Steps (b) to (g) for each side of the folding cot for all possible ways in which a side of the folding cot may fold.

(i) If the distance measured in Step (g) is less than 80 mm then the fabric shall be removed and the test repeated. Ensure a minimal amount of fabric is cut out to expose the top rail to enable the measurement to be taken. Measure the thickness of fabric and padding under compression.

L4 REPORT

The following information shall be reported and, if appropriate, noted on a diagram of the folding cot.

(a) Any occurrences of angle between sections of the folding cot side which at a distance 100 mm above the bottom of the gap, were less than 90 degrees as measured in Step L3(f).

(b) Any occurrences of distance between sections of the folded side of the folding cot that were less than 80 mm as measured in Step L3(g).

(c) Where a test was done in accordance with Step L3(i) then record the results of the width measured plus twice the thickness of fabric.

(d) Reference to this test method, i.e. AS/NZS 2195, Appendix L.

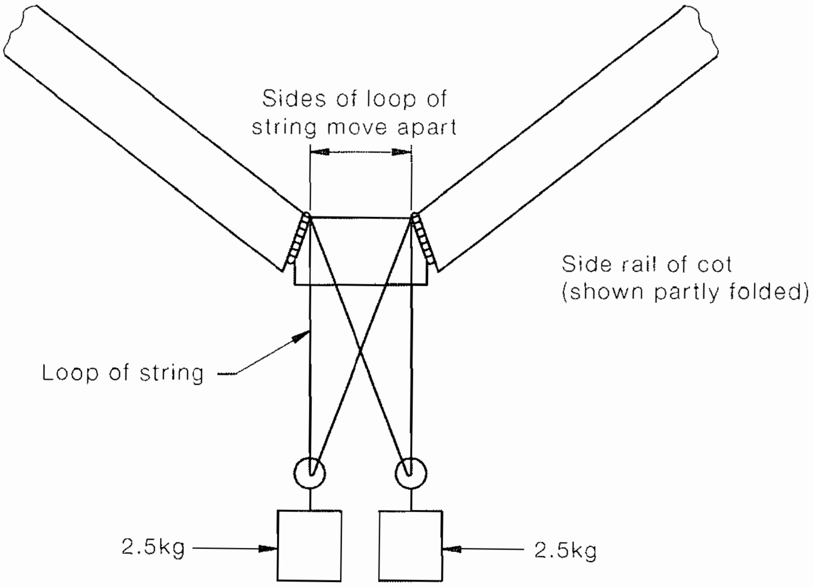

Sides of loop of string move apart
Side rail of cot (shown partly folded)
Loop of string
2.5kg
2.5kg

FIGURE L1 ENTRAPMENT TEST SET UP—ONE SIDE OF THE COT

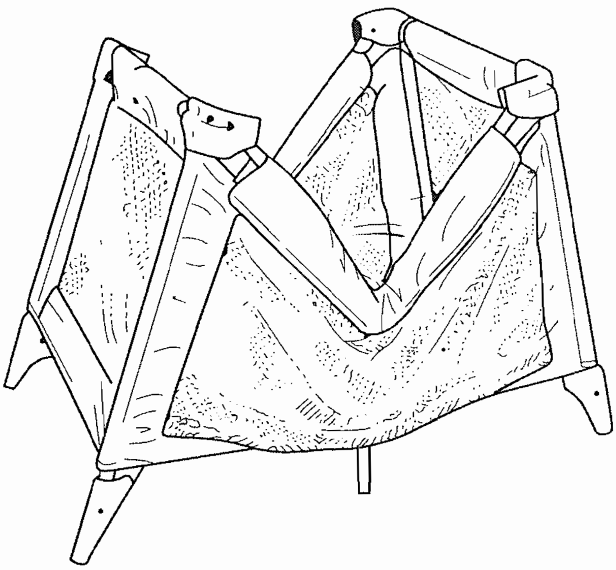


FIGURE L2 COT WITH BOTH SIDES UNLOCKED

APPENDIX M

ACCIDENTAL DISLODGMENT TEST FOR AN ACCESSORY

(Normative)

M1 SCOPE

This Appendix sets out a method for testing the combination of mattress, base and bassinet and the folding cot for resistance to accidental dislodgment of the accessory from the folding cot.

NOTE: Clause 10.15 specifies the compliance requirement.

M2 PROCEDURE

The procedure shall be as follows:

(a) Where applicable, assemble the accessory and folding cot in accordance with the manufacturer's instructions. Fit the accessory to the folding cot and apply all locking or attachment devices.

(b) Lift one side of the folding cot until the cot is balanced on two lower corners then gently allow the folding cot to move past the point of balance allowing the cot to tip over on its side.

(c) Observe whether the accessory became separated from the folding cot.

(d) Repeat Steps (b) and (c) above on the opposite side of the folding cot.

(e) Repeat Steps (a) to (d) for all other possible assembly arrangements of the accessory and folding cot.

M3 REPORT

The following information shall be reported:

(a) Whether the accessory became separated from the folding cot for any assembly arrangement.

(b) Reference to this test method, i.e. AS/NZS 2195, Appendix M.

APPENDIX N

CASTOR OR WHEEL BRAKE EFFICIENCY

(Normative)

N1 SCOPE

This Appendix sets out the method for testing the performance of the brakes and castors or wheels in stopping the folding cot from being inadvertently moved.

NOTE: Clause 10.16 specifies the compliance requirement.

N2 APPARATUS

The following apparatus is required:

(a) A means of applying a measured force of 100 ±2 N.

(b) A means of measuring angle in degrees.

(c) A circular shaped object with a diameter of 210 ±10 mm and a thickness of 25 ±10 mm having a mass of 5 ±0.1 kg. The outer edges shall be rounded off with a radius of 10 ±5 mm.

NOTE: A 5 kg barbell weight would be suitable.

(d) A test floor consisting of unpolished vinyl floor covering on a concrete base. Any joint shall create a step of not more than 1 mm.

N3 PROCEDURE

The procedure shall be as follows:

(a) Assemble the folding cot according to the manufacturer's instructions.

(b) Place the test mass described in Paragraph N2(c) on the geometric centre of the base of the folding cot.

(c) Apply the brakes to the castors or wheels on one end or side of the folding cot. The end or side shall be the shortest end or side if the castors or wheels swivel or the end or side shall be such that when the force is applied it shall be in such a direction that will cause the castors or wheels to rotate.

(d) Mark a line on the wheel at the point where it touches the floor.

(e) Apply a horizontal force of 100 ±5 N to the lower edge of the folding cot and central to the width and at the same end or side as the braked castors or wheels. Maintain for 5 seconds.

(f) After the force has been released observe whether any brake disengaged and measure the angle of any rotation.

(g) Repeat Steps (c) to (f) for the same wheels but apply the force at the opposite end or side of the folding cot causing the castors or wheels to rotate in the opposite direction.

(h) Where the folding cot is fitted with 4 castors or wheels, repeat Steps (c) to (g) with the two sets of castors or wheels at the other end or side of the folding cot.

N4 REPORT

The following information shall be reported:

(a) Whether any brake disengages.

(b) Whether any castor or wheel rotated more than 180°.

(c) Reference to this test method, i.e. AS/NZS 2195, Appendix N.

APPENDIX O

TEXTILE MATERIAL ATTACHMENT TEST

(Normative)

O1 SCOPE

This Appendix sets out the method for testing the strength of attachment of textile material to the frame of the folding cot.

NOTE: Clause 10.17 specifies the compliance requirement.

O2 APPARATUS

The following apparatus is required:

(a) Rigid loading pad, 150 mm × 75 mm and at least 10 mm thick.

(b) Means of applying a measured force of 90 N.

(c) A suitable timing device.

O3 PROCEDURE

The procedure shall be as follows:

(a) Assemble the folding cot in accordance with the manufacturer's instructions and place the folding cot on its side so that its side lies in a horizontal plane.

(b) The folding cot shall be secured so that it does not move or fold when placed on its side. Any support necessary to maintain the position shall not provide any influence to the side under test.

(c) Place the loading pad (O2(a)) on the side of the folding cot with the 150 mm edge running parallel to the top rail.

(d) Gradually apply a force of 90 ±5 N on the loading pad over 5 s and maintain for an additional 10 s. Gradually remove the force over 1 s.

(e) Repeat Step (d) a further 9 times, allowing 10 s recovery time between tests.

(f) Repeat Steps (c) to (e) at the following areas of the folding cot:

    (i) At the geometric centre of the side or, where exterior framing interferes with the test, as close as possible to the geometric centre.

    (ii) With the 75 mm edge of the load block place between 25 mm and 50 mm from the top edge of the top rail at the centre-line.

    (iii) With the 75 mm edge of the load block place between 25 mm and 50 mm from the bottom edge of the side at the centre-line.

(g) Repeat on the opposite side.

(h) Repeat on each end.

O4 REPORT

The following information shall be reported:

(a) Whether the textile material produced any opening.

(b) Reference to this test method, i.e. AS/NZS 2195, Appendix O.

APPENDIX P

TEST FOR SECURITY OF MOSQUITO NET

(Normative)

P1 SCOPE

This Appendix sets out a method of testing for the security of a mosquito net.

NOTE: Clause 10.19 specifies the compliance requirement.

P2 APPARATUS

The following apparatus is required:

(a) A means of lowering and lifting of the weight on the mesh surface.

(b) A weight with a mass of 5 ±0.1 kg, a diameter of approximately 210 ±5 mm and a means of attachment.

(c) A means of measuring in millimetres.

P3 PROCEDURE

The procedure shall be as follows:

(a) Assemble the folding cot in accordance with the manufacturer's instructions.

(b) Attach the mosquito net to the folding cot in accordance with the manufacturer's instructions.

(c) Measure the distance between the bottom edge of the mosquito net and the upper surface of the top rail on all sides.

(d) Lower the weight gently on the geometric centre of the top surface of the mosquito net (see Figure P1) and leave for 15 s, then gently remove the weight.

(e) Repeat Step (e) a further 9 times, allowing a 5 s recovery time between tests.

(f) Measure the distance between the bottom edge of the mosquito net and the upper surface of the top rail on all sides (see Figure P2).

P4 REPORT

The following information shall be reported and if appropriate, noted on a diagram of the folding cot.

(a) Whether the mesh could be dislodged.

(b) Whether the mosquito net moved upward by more than 200 mm based on measurements made in Steps P3(c) and P3(f).

(c) Whether the distance between the bottom edge of the mosquito net and the upper surface of the top rail on all sides measured in Steps P3(f) is less than 200 mm.

(d) Reference to this test method, i.e. AS/NZS 2195, Appendix P.

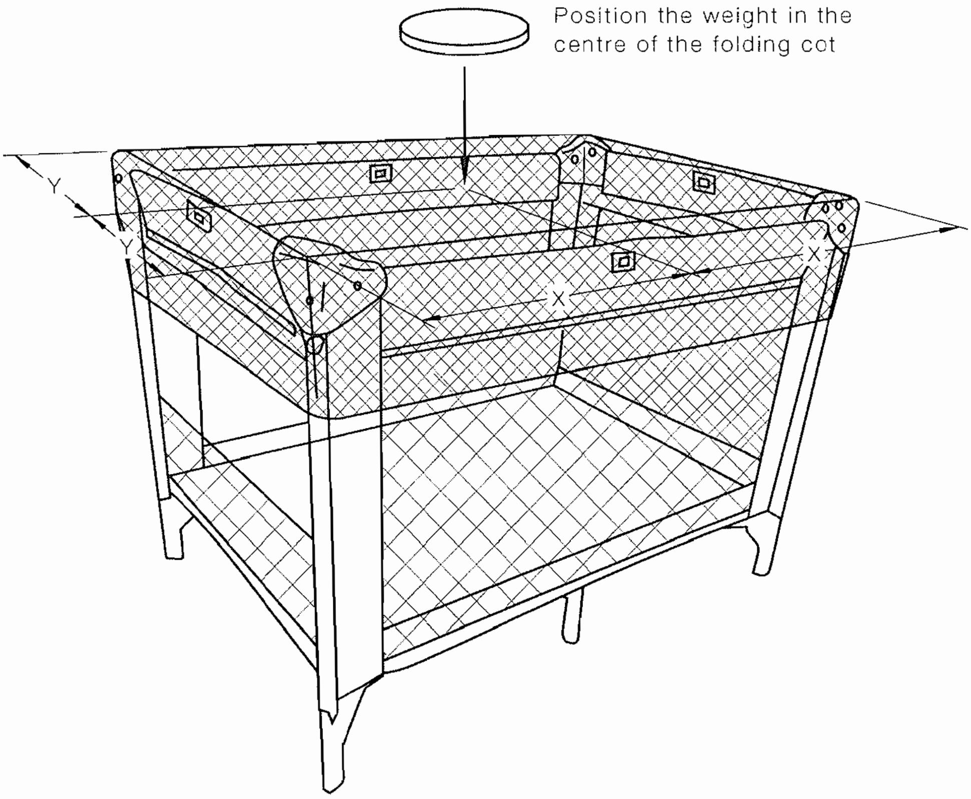
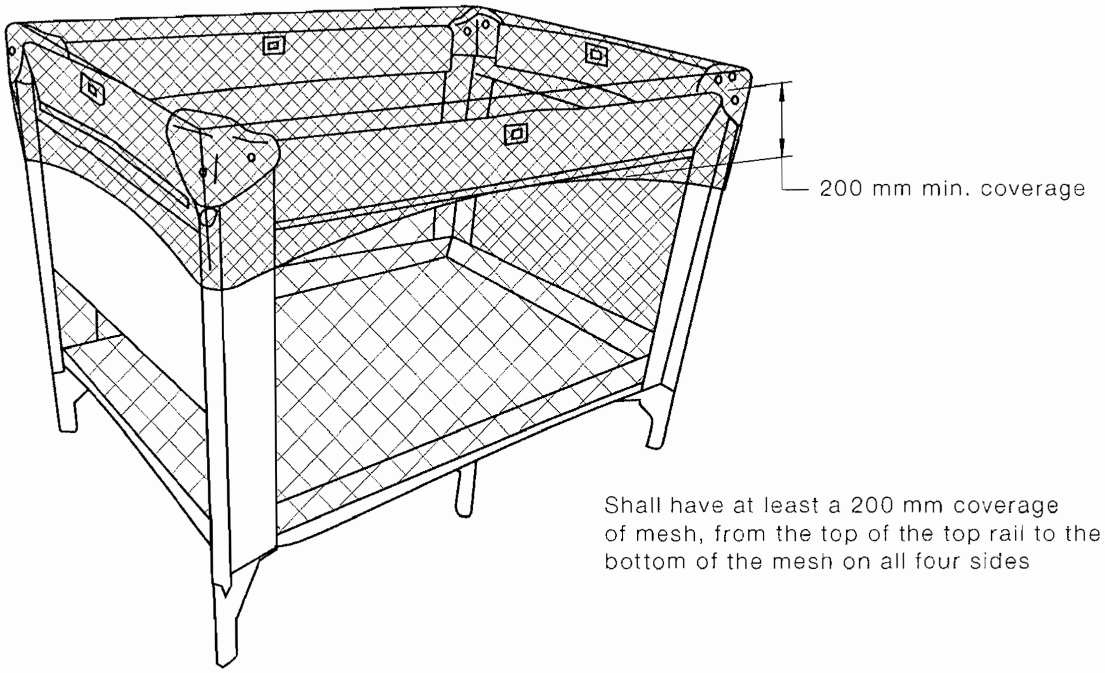


FIGURE P1 POSITIONING OF WEIGHT



Shall have at least a 200 mm coverage of mesh, from the top of the top rail to the bottom of the mesh on all four sides

FIGURE P2 MEASUREMENT OF MINIMUM COVERAGE

APPENDIX Q

MATTRESS AND BASE DEFLECTION TEST

(Normative)

Q1 SCOPE

This Appendix sets out the method for determining the deflection of a mattress and base and the snug fit of the mattress and base to the folding cot.

NOTE: Clause 10.21 specifies the compliance requirements.

Q2 APPARATUS

The following apparatus is required:

(a) A spherical mass made of a suitable rigid material having a diameter of 195 ±0.5 mm and a mass of 9.8 ±0.1 kg.

(b) A cylindrical probe made of a suitable rigid material having a hemi-spherical end, approximately 150 mm long and having the 50 ±0.5 mm diameters.

(c) A means of measuring distance in millimetres.

(d) A means of applying and measuring a force up to 50 ±2.5 N.

(e) A means of establishing a fixed reference point for measuring vertical distances from directly above the mattress.

Q3 PROCEDURE

The procedure shall be as follows:

(a) Place the mattress and base on a firm flat surface.

(b) Measure the thickness of the mattress as uncompressed.

(c) Place the 9.8 kg mass on the geometric centre of the mattress.

(d) Determine the compression distance of the mattress.

(e) Assemble the folding cot in accordance with the manufacturer's instructions.

(f) Determine the distance between the geometric centre of the top surface of the mattress and a pre-determined fixed reference point directly above it.

(g) Position the 9.8 kg test mass in the geometric centre of the folding cot.

(h) Measure the deflection distance of the mattress and base.

(i) Apply the 50 mm diameter probe with a vertical downward force of 50 +5, −0 N to any gap between the mattress and base, and the sides and ends of the folding cot. Note any gap that allows the entry of probe.

(j) Repeat Steps (f) to (i) for positions a, b, c and d as shown in Figure D2.

(k) Repeat Steps (j) and (k) for other mattress and base position, if there is any.

(l) Where applicable, assemble and fit the bassinet to the folding cot in accordance with the manufacturer's instructions.

(m) Measure the distance between the geometric centre of the top surface of the mattress and pre-determined fixed reference point directly above it.

(n) Position the 9.8 kg test mass in the centre of the bassinet.

(o) Determine the deflection distance of the mattress and base.

(p) Apply the 50 mm diameter spherical probe with a vertical downward force of 50 +5,–0 N to any gap between the mattress and base, and sides and ends of bassinet. Note any gap that allows the entry of probe.

(q) Repeat Steps (m) to (p) for positions a, b, c and d as shown in Figure D2.

Q4 REPORT

The following information shall be reported:

(a) The deflection distances of the mattress and base in the folding cot determined in Step Q3(h) minus the compression distance of the mattress determined in Step Q3(d).

(b) The deflection distance of the mattress and base in the bassinet determined in Step Q3(o) minus the compression distance of the mattress determined in Step Q3(d).

(c) Whether any gap between the mattress and base, and the sides and ends of the folding cot allowed the entry of the 50 mm diameter spherical probe in Step Q3(i).

(d) Whether any gap between the mattress and base, and the sides and ends of the bassinet allowed the entry of the 50 mm diameter spherical probe in the Step Q3(p).

(e) Reference to this test method, i.e. AS/NZS 2195, Appendix Q.

NOTES

NOTES

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